631

Access DB# 631

SEARCH REQUEST FORM

Scientific and Technical Information Center

Requester's Full Name: Andrea Valenti Examiner #: 78503 Date: 6/3/02
Art Unit: 3643 Phone Number 30 5-3010 Serial Number: 09/837,020
Mail Box and Bldg/Room Location: CPK5-3411 Results Format Preferred (circle): PAPER DISK E-MAIL

If more than one search is submitted, please prioritize searches in order of need.
****

Please provide a detailed statement of the search topic, and describe as specifically as possible the subject matter to be searched. Include the elected species or structures, keywords, synonyms, acronyms, and registry numbers, and combine with the concept or utility of the invention. Define any terms that may have a special meaning. Give examples or relevant citations, authors, etc, if known. Please attach a copy of the cover sheet, pertinent claims, and abstract.

Title of Invention: Method of Preventing Defective Germination or Growth of Plant

Inventors (please provide full names): Yasushi Kohno, Hyogo
Noritoshi Katsutani, Hiroshima

Earliest Priority Filing Date: 6/20/00

**For Sequence Searches Only* Please include all pertinent information (parent, child, divisional, or issued patent numbers) along with the appropriate serial number.*

Refrigerating coated seeds (plant seeds) to prevent germination.

In other words, by refrigerating the encapsulated seed it improves germination once planted.

****

STAFF USE ONLY		Type of Search		Vendors and cost where applicable	
Searcher:	Tamie Bibb	NA Sequence (#)		STN	
Searcher Phone #:	306-5967	AA Sequence (#)		Dialog	
Searcher Location:	8D4	Structure (#)		Questel/Orbit	
Date Searcher Picked Up:	6/4	Bibliographic	X	Dr.Link	
Date Completed:	6/5	Litigation		Lexis/Nexis	
Searcher Prep & Review Time:	40	Fulltext	✓	Sequence Systems	
Clerical Prep Time:		Patent Family		WWW/Internet	
Online Time:	200	Other		Other (specify)	

PTO-1590 (8-01)

File 344:CHINESE PATENTS ABS APR 1985-2002/APR
(c) 2002 EUROPEAN PATENT OFFICE
File 347:JAPIO Oct/1976-2001/Dec(Updated 020503)
(c) 2002 JPO & JAPIO
File 350:Derwent WPIX 1963-2001/UD,UM &UP=200235
(c) 2002 Thomson Derwent
File 371:French Patents 1961-2002/BOPI 200209
(c) 2002 INPI. All rts. reserv.

Set	Items	Description
S1	4313	(SEED OR SEEDS)(5N)(COAT OR COATS OR COATING OR COATED OR COVER? OR OVERLAY? OR LAMIN? OR FILM? OR ENVELOP? OR TOPCOAT? OR OVERCOAT? OR MULTICOAT? OR ENCAS? OR ENCAPSULAT?)
S2	1111600	(REFRIG? OR COOL??? OR CHILL? OR FRIDGE? OR ICE()BOX) OR ((LOWER OR LOW OR REDUCE? OR REDUCING OR REDUCT?)(5N)TEMPERATURE?)
S3	32063	GERMINAT? OR (PLANT?(3N)GROW?)
S4	3359200	MINIMIZ? OR PREVENT? OR PROHIBIT? OR INHIBIT? OR STOP? OR AVOID? OR ESCAP?
S5	172650	DEFECT?
S6	15514	SOW OR SOWING OR PLANT?(3N)(SEED OR SEEDS)
S7	206418	(AQUEOUS? OR AQUA OR WATER)(5N)(GEL OR SOLUTION? OR LAYER?)
S8	818	(COAT? OR ENCAPSULAT?)(3N)SEEDS
S9	33	S1 AND S2 AND S3
S10	1	S9 AND S4 AND S5
S11	11	S9 AND S4
S12	10	S11 NOT S10
S13	207	S1 AND S2
S14	14	S13 AND S7
S15	6	S14 AND (S4 OR S5 OR S6)
S16	4	S15 NOT (S10 OR S11)
S17	48	S1()S3
S18	3	S17 AND S2
S19	3	S18 NOT (S10 OR S11 OR S15)
S20	16	S1(2N)S2
S21	6	S20 AND S3
S22	4	S21 NOT (S10 OR S11 OR S15 OR S18)
S23	163	AU='KOHNO Y' OR AU='KOHNO YASUSHI'
S24	2	AU='KATSUTANI N' OR AU='KATSUTANI NORITOSHI'
S25	29	(S23 OR S24) AND (S1 OR S3 OR S8 OR S6)
S26	2	S25 AND S5
S27	1	S26 NOT (S10 OR S11 OR S15 OR S18 OR S21)
S28	7	S25 AND S7
S29	6	S28 NOT (S10 OR S11 OR S15 OR S18 OR S21 OR S26)
S30	1	S25 AND S2
S31	0	S30 NOT (S10 OR S11 OR S15 OR S18 OR S21 OR S26 OR S28)

10/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014335879
WPI Acc No: 2002-156582/200221
XRPX Acc No: N02-119175
Method of preventing defective germination **or** growth **of** plant **involves** encapsulating **plant** seeds **in aqueous gel capsule,** refrigerating **plant seeds under condition, and sowing plant seeds**
Patent Assignee: AGRITECNO YAZAKI CO LTD (AGRI-N); AGRITECHNO YAZAKI KK (AGRI-N); KATSUTANI N (KATS-I); KOHNO Y (KOHN-I)
Inventor: KATSUTANI N; KOHNO Y
Number of Countries: 029 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1166614	A1	20020102	EP 2001110107	A	20010502	200221 B
JP 2002000011	A	20020108	JP 2000184401	A	20000620	200221
US 20020011025	A1	20020131	US 2001837020	A	20010418	200221
CN 1329814	A	20020109	CN 2001117902	A	20010511	200229

Priority Applications (No Type Date): JP 2000184401 A 20000620
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1166614	A1	E	7	A01C-001/06	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI TR					
JP 2002000011	A		4	A01C-001/06	
US 20020011025	A1			A01C-001/06	
CN 1329814	A			A01C-001/00	

Abstract (Basic): EP 1166614 A1
NOVELTY - The method involves **encapsulating** plant **seeds** in an aqueous gel capsule, **refrigerating** the plant seeds under the condition that the plant seeds do not **germinate** , and sowing the plant seeds.
USE - For **preventing defective germination** or **growth** of **plant** .
ADVANTAGE - Even plant seeds having small size can be sown easily and securely.
pp; 7 DwgNo 0/0
Title Terms: METHOD; **PREVENT** ; **DEFECT** ; **GERMINATE** ; GROWTH; PLANT; ENCAPSULATE; PLANT; SEED; AQUEOUS; GEL; CAPSULE; **REFRIGERATE** ; PLANT; SEED; CONDITION; SOW; PLANT; SEED
Derwent Class: P11
International Patent Class (Main): A01C-001/00; A01C-001/06
International Patent Class (Additional): A01C-001/00
File Segment: EngPI

12/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014494489
WPI Acc No: 2002-315192/200235
XRAM Acc No: C02-091646
XRPX Acc No: N02-246745
Composition, used for forming a wood substitute, comprises a high molecular weight aliphatic polyester and a comminuted cellulose-containing plant material
Patent Assignee: BIO DEG MOULDINGS PTY LTD (BIOD-N)
Inventor: HILL A L S; LECKEY R A; REICHLE A J
Number of Countries: 096 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200206023	A1	20020124	WO 2001AU853	A	20010713	200235	B

Priority Applications (No Type Date): AU 20008805 A 20000714
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200206023	A1	E	11	B27N-001/02	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

Abstract (Basic): WO 200206023 A1
NOVELTY - Composition (I) comprises a high molecular weight aliphatic polyester (30-70% volume by volume) and a comminuted cellulose-containing plant material (balance). The aliphatic polyester comprises 1,4-butanediol condensed with adipic acid and/or succinic acid.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for: (1) a process for producing a wood substitute comprising: (i) heating the composition (I) of the claim; (ii) forming the heated material into a desired product; and (iii) allowing the product to **cool** to at least ambient temperature; and (2) the wood substitute produced.
USE - Composition is used for forming a wood substitute (claimed).
ADVANTAGE - Articles made from the wood substitute are biodegradable and do not give off toxic fumes when combusted.
pp; 11 DwgNo 0/0
Title Terms: COMPOSITION; FORMING; WOOD; SUBSTITUTE; COMPRISE; HIGH; MOLECULAR; WEIGHT; ALIPHATIC; POLYESTER; COMMINUTE; CELLULOSE; CONTAIN; PLANT; MATERIAL
Derwent Class: A23; A97; F09; P63
International Patent Class (Main): B27N-001/02
International Patent Class (Additional): B27N-003/00; B27N-003/02; B27N-003/04; B27N-003/06; B27N-003/08; B27N-005/00; D21J-001/00; D21J-001/16
File Segment: CPI; EngPI

12/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014245773
WPI Acc No: 2002-066473/200209
XRAM Acc No: C02-019782
New seed treatment composition comprising choline chloride, a

calcium-containing salt, a potassium containing salt, and salicylic acid, useful for enhancing the growth of seeds, particularly under stressed conditions

Patent Assignee: UNIV MINNESOTA (MINU)
Inventor: JIAN L; LI P P H
Number of Countries: 095 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200182697	A2	20011108	WO 2001US13634	A	20010427	200209	B
AU 200157357	A	20011112	AU 200157357	A	20010427	200222	

Priority Applications (No Type Date): US 2000560117 A 20000428
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200182697	A2	E	27	A01N-033/12	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

AU 200157357	A		A01N-033/12	Based on patent WO 200182697

Abstract (Basic): WO 200182697 A2

NOVELTY - A novel composition useful for treating seeds, comprises choline chloride, a calcium-containing salt, a potassium-containing salt, and salicylic acid.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a method for treating seeds comprising treating a seed with a composition comprising choline chloride, a calcium-containing salt, a potassium-containing salt, and salicylic acid;

(2) a composition useful for treating seeds comprising choline chloride, a calcium-containing salt, a potassium-containing salt, salicylic acid, and glycerol;

(3) a composition useful for treating seeds, comprising choline chloride, chlorocholine chloride, a calcium-containing salt, a potassium-containing salt, salicylic acid, an alkanolamine, and glycerol;

(4) a composition useful for treating seeds comprising chlorocholine chloride, a calcium-containing salt, a potassium-containing salt, salicylic acid, and an alkanolamine, where the composition does not include ((4-chlorophenyl)methyl)-(1,1-dimethylethyl)-1,2,4-triazole-1-ethanol.

USE - The compositions can be used for treating seeds such as corn and soybean seed (claimed). The compositions are useful for treating seeds to allow for **planting** and **growing** of seedlings under stressed conditions such as cold, drought, salt and fungi. The compositions can enhance seed emergence rate from soil, early vigor of seedlings, growth and development of seedlings, and crop yield, improve root growth and development (e.g. one or more of branching, length of roots, diameter of roots, number of lateral roots, and root nodules), and improve crop growth (.e.g. one or more of increased height of the crop, increased plant fresh weight, **minimized** leaf **chilling** damage, and **minimized** leaf drought damage).

An experiment was performed by **coating** corn **seeds** of the variety N4242. The composition was made by combining 1.8 g Ca(NO3)2, 0.8 g K(NO)3, 5 mg salicylic acid, 1 ml aminoethanol, 0.5 ml chlorochloine chloride, 1.0 ml glycerol, 0.3 ml MAGNA- **COAT** (RTM), and 2 ml water. **Seeds** were prepared by **coating** and 4 replications (i.e. plots) were used for both control and **coated seeds** . The **seeds** were planted in very sandy soil. The resulting crops were harvested and the gram weight per 40 ears and gram weight per 1000 seed measured. The results showed that there was a significant increase in yield: gram wt.

per 40 ears=4307 for control, 5374 for treated; gram wt. per 1000 seeds=242 for control, 255 for treated.
pp; 27 DwgNo 0/0
Title Terms: NEW; SEED; TREAT; COMPOSITION; COMPRISE; CHOLINE; CHLORIDE; CALCIUM; CONTAIN; SALT; POTASSIUM; CONTAIN; SALT; SALICYLIC; ACID; USEFUL ; ENHANCE; GROWTH; SEED; STRESS; CONDITION
Derwent Class: C03
International Patent Class (Main): A01N-033/12
International Patent Class (Additional): A01N-031/02; A01N-033/08; A01N-037/40; A01N-059/06; A01N-059/08; A01N-059-08; A01N-059-06; A01N-037-40; A01N-033-08; A01N-033/12; A01N-031-02
File Segment: CPI

12/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014163606
WPI Acc No: 2001-647834/200174
Related WPI Acc No: 1998-377259
XRAM Acc No: C01-191058

Aqueous dispersion of crystalline polymer used for coating flexible fibrous substrates, e.g. human hair, comprises crystalline polymer particles and additive having desired effect on fibrous material

Patent Assignee: BALACHANDER N (BALA-I); BITLER S P (BITL-I); PHAN L (PHAN-I); STEWART R F (STEW-I); YOON V Y (YOON-I)
Inventor: BALACHANDER N; BITLER S P; PHAN L; STEWART R F; YOON V Y
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 20010014310	A1	20010816	US 96766865	A	19961212	200174	B
			US 96769639	A	19961212		
			US 97929750	A	19970915		
			WO 97US22772	A	19971212		
			US 98210421	A	19981211		
			US 2001764552	A	20010118		

Priority Applications (No Type Date): US 98210421 A 19981211; US 96766865 A 19961212; US 96769639 A 19961212; US 97929750 A 19970915; WO 97US22772 A 19971212; US 2001764552 A 20010118
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 20010014310	A1		18	A61K-007/06	CIP of application US 96766865
					CIP of application US 96769639
					CIP of application US 97929750
					CIP of application WO 97US22772
					Cont of application US 98210421
					CIP of patent US 6199318

Abstract (Basic): US 20010014310 A1
NOVELTY - An aqueous dispersion of crystalline polymer for setting flexible material comprises
(a) water;
(b) crystalline polymer particles dispersed in the water; and
(c) an additive having a desired effect on the fibrous material.
DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:
(A) a method of treating a seed or other organism to extend its dormancy comprising
(a) applying to the organism, the inventive non-phytotoxic coating composition; and
(b) evaporating the water from the composition;
(B) a method of making an aqueous dispersion comprising

(a) providing an aqueous reaction medium comprising
(i) water;
(ii) first monomer component comprising a hydrophobic monomer component; and
(iii) surfactant;
(b) polymerizing the monomer component in the aqueous reaction medium to form a crystalline polymer particles suspended in the reaction medium; and
(c) polymerizing a second monomer component to form a shell on the particles;
(C) a method for rendering a flexible fibrous material repeatedly settable comprising
(i) applying the composition to the fibrous material; and
(ii) evaporating the water while the composition is in contact with the fibrous material; and
(D) a substrate having the solid polymeric coating.
ACTIVITY - Fungicide; insecticide; germicide.
MECHANISM OF ACTION - Germicidal growth **inhibitor** .
USE - The aqueous dispersion is used for coating, e.g. to **prevent** fungi and insects attack, flexible fibrous materials, particularly human hair, wig, or doll hair. It can also be used for **coating seeds** , e.g. vegetable **seeds** and grain seeds, such as seeds of canola, maize, cotton, soybean, sugar beets, beans, tomato, potato, tobacco, corn, rice, wheat, sunflower, the brassica family, the solanaceae family, sorghum, barley, lentils, melons, cucumbers, cabbage, brussels sprouts, beans or peas. It can also be used for other organisms, e.g. bacterial, embryos, eggs, sprouts, bugs, rhizobium, seedlings, and potato cuttings.
ADVANTAGE - The composition has an external crosslinker which increases the apparent molecular weight of the polymer without becoming a covalently bound part of the polymer, and increases the mechanical strength of coatings formed from the aqueous dispersion of the polymer. Since a crosslinking monomer component is included, the resulting coating is easily removable and frangible. The presence of nonionic surfactant lowers the interfacial tension between the monomer oil droplets and the aqueous phase, provides stabilization of the polymer dispersion, and reduces polymer dispersion's sensitivity to shear, temperature and the presence of electrolytes. The polymer gives the fabric a permanent press character that does not easily reset in a clothes dryer at, e.g. at least 60, preferably 80degreesC. The resulting coating also **prevents** substantial imbibition of water by the seed at too **low temperature** , thus **preventing** imbibitional **chilling** injury and extending the dormancy of the seed, but permits the seed to imbibe water at temperatures at which **germination** can take place satisfactorily. It is not necessary for the coating to be completely impermeable to water at temperatures below melting point, e.g. the **coating** ensures that the **seed** imbibes no more than 21, preferably 10% of water over a period of 48 hours at temperatures below melting point. The external crosslinker and crosslinking component result in coating which maintains its integrity well below melting point, but disintegrates easily when the seed expands, and which does not interfere with **germination** and growth.
pp; 18 DwgNo 0/8
Title Terms: AQUEOUS; DISPERSE; CRYSTAL; POLYMER; COATING; FLEXIBLE; FIBRE; SUBSTRATE; HUMAN; HAIR; COMPRISE; CRYSTAL; POLYMER; PARTICLE; ADDITIVE; EFFECT; FIBRE; MATERIAL
Derwent Class: A96; A97; C04; D21; F06; G02
International Patent Class (Main): A61K-007/06
File Segment: CPI

12/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013990653
WPI Acc No: 2001-474868/200151
XRAM Acc No: C01-142308
XRPX Acc No: N01-351452

Inhibiting germination **of seeds, especially to allow autumn planting, comprises** enveloping **the** seeds **in a water-impervious** coating **comprising a water-insoluble polymer that fractures when frozen**

Patent Assignee: GROW TEC INC (GROW-N)
Inventor: ENDERS N; ZAYCHUK K S
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 6230438	B1	20010515	US 99399583	A	19990920	200151	B

Priority Applications (No Type Date): US 99399583 A 19990920
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6230438	B1		7	A01C-001/06	

Abstract (Basic): US 6230438 B1

NOVELTY - Method for **inhibiting germination** of **seeds** comprises **enveloping** the **seeds** in a water-impervious **coating** comprising a water-insoluble polymer having a glass transition temperature (Tg) of 0-12degreesC, a water absorptivity of at least 15 wt.% after 24 hours and a moisture vapor transmission rate of less than 200 g/m2 per 24 hours.

DETAILED DESCRIPTION - INDEPENDENT CLAIMS are also included for:

(1) a **seed** having such a **coating** as above except that the glassification temperature is 0-20 degreesC and the **coating prevents** the **seed** imbibing water until the ambient temperature reaches the polymer glassification temperature and the absorbed water freezes so fracturing the coating and rendering it water-permeable on exposure to temperatures above 0 degreesC; and

(2 a method as above specifically for the fall planting of **cool** season plants where the **coated seeds** are planted 2 weeks before the expected first hard freeze except that the polymer has a glassification temperature of -4 to 12 degreesC and the **coating prevents** the **seed** imbibing water until the ambient temperature reaches below freezing point of water so fracturing the coating and rendering it water-permeable on exposure to temperatures above 0 degreesC.

USE - The method is useful for **inhibiting germination** of cold-season plant seeds, especially of Brassica spp., Medicago sativa, Melilotus spp., Trifolium spp., Glycine max, Lens esculenta, Pisum sativum, Cicer arietinum, Phaseolus spp., Triticum spp., Hordeum spp., Secale cereale, Triticosecale, Carum carvi, Phalaris canariensis, Coriandrum sativum, Zea mays, Avena spp. and Lolium spp., to allow autumn planting for spring **germination** .

ADVANTAGE - The **coating prevents** the **seeds** from imbibing water until the ambient temperature drops below freezing, whereupon absorbed water freezes and fractures the coating, rendering it water-permeable upon exposure to temperatures above 0degreesC.

pp; 7 DwgNo 0/0

Title Terms: **INHIBIT** ; **GERMINATE** ; SEED; ALLOW; AUTUMN; PLANT; COMPRISE; ENVELOP; SEED; WATER; IMPERVIOUS; COATING; COMPRISE; WATER; INSOLUBLE; POLYMER; FRACTURE; FREEZE
Derwent Class: A18; A97; C07; P11
International Patent Class (Main): A01C-001/06
International Patent Class (Additional): A01N-025/06
File Segment: CPI; EngPI

12/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013883730
WPI Acc No: 2001-367943/200139
XRAM Acc No: C01-112967
XRPX Acc No: N01-268445
Seed coated **in a water insoluble, freeze sensitive** seed coating **to control** germination .
Patent Assignee: GROW TEC INC (GROW-N)
Inventor: ENDERS N; ZAYCHUK K
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
CA 2282921	A1	20010321	CA 2282921	A	19990921	200139	B

Priority Applications (No Type Date): CA 2282921 A 19990921
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
CA 2282921	A1	E	19	A01C-001/06	

Abstract (Basic): CA 2282921 A1
NOVELTY - **Seed coated** in a continuos, adherent water impervious coating to control **germination** until after exposure to freezing temperatures.
DETAILED DESCRIPTION - A **seed coated** in a continuous, adherent water impervious coating to control **germination** until after exposure to freezing temperatures where the coating comprises a water insoluble polymer with the following properties: a glassification temperature of about 20degreesC to about 0degreesC, a water absorptivity value of at least 15% w/w after 24 hours and a moisture vapor transmission rate of less than 200 g/m2 /24 hours; where the **coating prevents** the **seed** from imbibing water until the ambient temperature reaches the glassification temperature of the polymer and the absorbed water freezes and fractures the **seed coating** rendering it water permeable on exposure to temperatures above 0degreesC.
USE - The **seed coating** is used to control **germination** of the seed and is used e.g. for fall planting of **cool** season plants where the seed are planted in a field 2 weeks prior to the expected date of the first hard freeze.
pp; 19 DwgNo 0/0
Title Terms: SEED; COATING; WATER; INSOLUBLE; FREEZE; SENSITIVE; SEED; COATING; CONTROL; **GERMINATE**
Derwent Class: A97; C07; P11; P13
International Patent Class (Main): A01C-001/06
International Patent Class (Additional): A01G-001/00
File Segment: CPI; EngPI

12/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013423577
WPI Acc No: 2000-595520/200057
XRAM Acc No: C00-178025
XRPX Acc No: N00-441103
Aqueous film **-forming** seed **treatment composition, useful for** preventing **disease and increasing growth, comprises a film-forming crosslinked proteinaceous material and other active ingredients e.g. pesticides and fertilizers**
Patent Assignee: AVENTIS CROPSCIENCE GMBH (AVET); AVENTIS RES &

TECHNOLOGIES GMBH & CO KG (AVET)
Inventor: KRETZSCHMAR G
Number of Countries: 092 Number of Patents: 006
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1036492	A1	20000920	EP 99105217	A	19990313	200057	B
WO 200054568	A1	20000921	WO 2000EP2170	A	20000313	200057	
AU 200035550	A	20001004	AU 200035550	A	20000313	200101	
BR 200008982	A	20011226	BR 20008982	A	20000313	200206	
			WO 2000EP2170	A	20000313		
EP 1164826	A1	20020102	EP 2000914123	A	20000313	200209	
			WO 2000EP2170	A	20000313		
CZ 200103302	A3	20020313	WO 2000EP2170	A	20000313	200223	
			CZ 20013302	A	20000313		

Priority Applications (No Type Date): EP 99105217 A 19990313
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1036492	A1	E	17	A01C-001/06	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
WO 200054568	A1	E		A01C-001/06	
Designated States (National): AE AL AM AU AZ BA BB BG BR BY CA CN CR CU CZ DM DZ EE GD GE HR HU ID IL IN IS JP KG KP KR KZ LC LK LR LT LV MA MD MG MK MN MX NO NZ PL RO RU SG SI SK SL TJ TM TR TT UA US UZ VN YU ZA					
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW NL OA PT SD SE SL SZ TZ UG ZW					
AU 200035550	A			A01C-001/06	Based on patent WO 200054568
BR 200008982	A			A01C-001/06	Based on patent WO 200054568
EP 1164826	A1	E		A01C-001/06	Based on patent WO 200054568
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
CZ 200103302	A3			A01C-001/06	Based on patent WO 200054568

Abstract (Basic): EP 1036492 A1

NOVELTY - Crosslinked proteins are used in **seed** treatment and **coating** formulations.

DETAILED DESCRIPTION - An aqueous **film** -forming **seed** treatment composition comprises:

(a) 5-50 wt.% of a film-forming crosslinked proteinaceous material (I); and

(b) 0.001-50 wt.% of other active ingredients selected from pesticides, fertilizers, bioregulating additives, additives for increasing the fertilizer efficiency, **plant** productivity, **growth** and nutrient accumulation and adjuvants or any combination of these.

INDEPENDENT CLAIMS are included for the following:

(i) a method for preparing an aqueous **film** -forming **seed** treatment composition;

(ii) seeds treated using the above composition.

USE - The composition is useful as a **seed** treatment and **coating** formulation for **seeds** selected from cereals such as wheat, barley, rye, oats, rice or sorghum, sugar beet, fodder beet, stone fruits or soft fruits such as apples, pears, plums, peaches, almonds, cherries, strawberries, raspberries or blackberries, leguminous plants such as beans, lentils, peas, or soybeans, oil plants such as rape, mustard, poppy, olives, sunflowers, coconut, castor oil plants or cocoa beans, cucumbers, melons, fiber plants such as cotton, flax, hemp or jute, citrus fruits such as oranges, lemons, grapefruits or mandarins, vegetables such as spinach, lettuce, asparagus, cabbages, carrots, onions, tomatoes, potatoes or paprika, lauraceae such as avocados, cinnamon or camphor, ornamental plants such as flowers, shrubs or broad-leaved plants, evergreens such as conifers or other plants such as maize, tobacco, nuts, coffee, sugar cane, tea, vines, hops, bananas or natural rubber, to **prevent** disease infestation on seeds and

seedlings and to increase seedling vigor and **plant growth** .

ADVANTAGE - **Seed** treatment and **coating** formulations prepared from (I) provide an efficient **plant growth** promoting composition and a controlled delivery matrix for pesticides, micronutrients and/or bioregulators. (I) provides a crosslinked, water-resistant **film** -forming protein matrix **covering** the **seed** surface which provides enhanced seedling vigor and growth. The compositions entrap pesticides and other adjuvants to provide control and **prevention** of disease infestation on seed and seedling to further enhance crop yields.

pp; 17 DwgNo 0/0

Title Terms: AQUEOUS; FILM; FORMING; SEED; TREAT; COMPOSITION; USEFUL; **PREVENT** ; DISEASE; INCREASE; GROWTH; COMPRISE; FILM; FORMING; CROSSLINK; PROTEINACEOUS; MATERIAL; ACTIVE; INGREDIENT; PEST; FERTILISER

Derwent Class: A18; A28; A97; C03; P11

International Patent Class (Main): A01C-001/06

File Segment: CPI; EngPI

12/5/7 (Item 7 from file: 350)

DIALOG(R)File 350:Derwent WPIX

012540901

WPI Acc No: 1999-347007/199929

XRAM Acc No: C99-102002

XRPX Acc No: N99-259480

Regenerating Salvia plants

Patent Assignee: REYNOLDS TOBACCO CO R J (RETO)

Inventor: HELLMANN G M; LIU W; REICH R C

Number of Countries: 001 Number of Patents: 001

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
US 5908771	A	19990601	US 97792081	A	19970131	199929	B

Priority Applications (No Type Date): US 97792081 A 19970131

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5908771	A		21	A01H-004/00	

Abstract (Basic): US 5908771 A

NOVELTY - A method (I) for the regeneration of Salvia plants (family Lamiaceae), in particular Clary sage, via organogenesis using a multistage culturing process involving the use of exogenous **plant growth** regulators and specific explant tissues to establish organogenic tissue cultures and to reproduce Salvia plants, is new.

DETAILED DESCRIPTION - A method (I) of producing organogenic tissues from a plant of the genus Salvia (which contains 700 members distributed in tropical and temperate regions, e.g. Salvia sclarea or Clary sage), comprising:

(i) obtaining an immature zygotic embryo cotyledon (IZEC) explant of a Salvia plant; and

(ii) culturing the explant on an initiation medium containing nutrients and at least 1 **plant growth** regulator comprising auxin, to produce organogenic tissues.

USE - (I) may be used in genetic transformation and plant propagation procedures and also for creating somaclonal variation in plants.

In particular, (I) may be used to provide plant material for use in producing genetically modified Clary sage as regeneration is an essential component of strategies for the transformation of sage using transgenes.

Clary sage is cultivated for the production of essential oils, sclareol and sclareol derivatives. Sclareol and sclareol derivatives

are used as major components in perfume, in food flavorings, in wine making and as components of cigarette flavors.

ADVANTAGE - Although conventional plant breeding has played an important role in the improvement of Salvia plants, the yields of products from such plants (especially Clary sage) is still very low. (I) provides an improved and dependable method of regenerating sage plants for the production of Clary sage oil and sclareol, as well as providing tissues and systems for transforming Salvia to provide genetically modified plants. The method is particularly suitable for the genetic engineering of plants as in vitro proliferation of organogenic tissues consistently provides tissues with the same genetic background for shoot initiation and so **minimizes** the influence of environmental factors.

pp; 21 DwgNo 0/12

Title Terms: REGENERATE; SALVIA; PLANT
Derwent Class: C06; D16; P13
International Patent Class (Main): A01H-004/00
International Patent Class (Additional): C12N-015/82
File Segment: CPI; EngPI

12/5/8 (Item 8 from file: 350)

011981031
WPI Acc No: 1998-397941/199834
Related WPI Acc No: 1985-250840; 1990-231246; 1994-074348; 1995-035648; 1996-424655; 1997-297423
XRAM Acc No: C98-120374
XRPX Acc No: N98-309630

Use of heterologous chitinase nucleic acid - for transforming bacteria or plants, for increasing plant resistance to plant pathogens, increase chilling **resistance and increasing sweetness.**

Patent Assignee: DNA PLANT TECHNOLOGY CORP (DNAP)
Inventor: JONES J D; SUSLOW T V
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 5776448	A	19980707	US 84593691	A	19840326	199834 B
			US 86888033	A	19860718	
			US 90550253	A	19900709	
			US 92930970	A	19920814	
			US 94358901	A	19941219	
			US 96693835	A	19960801	

Priority Applications (No Type Date): US 94358901 A 19941219; US 84593691 A 19840326; US 86888033 A 19860718; US 90550253 A 19900709; US 92930970 A 19920814; US 96693835 A 19960801
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 5776448	A		25	C12N-001/21	CIP of application US 84593691
					CIP of application US 86888033
					Cont of application US 90550253
					CIP of application US 92930970
					Cont of application US 94358901
					CIP of patent US 4751081
					CIP of patent US 4940840
					CIP of patent US 5290687
					Cont of patent US 5374540
					Cont of patent US 5554521

Abstract (Basic): US 5776448 A
Production of a bacterial cell capable of producing chitinase,

comprises transforming the bacterial cells with a nucleic acid encoding the chitinase, the nucleic acid being isolated from a heterologous source, and whereby the bacterial cell is capable of expressing the nucleic acid. Also claimed are: (A) a method of protecting a plant from chitinase sensitive plant pathogens, comprising: (a) transforming a bacteria with a nucleic acid encoding a chitinase, the nucleic acid being isolated from a heterologous source; and (b) **growing** the **plant** in the presence of the bacteria; (B) a plant **seed - coating** composition comprising bacteria transformed with a nucleic acid encoding chitinase, the nucleic acid being isolated from a heterologous source, whereby the bacteria is capable of expressing the nucleic acid, the composition further comprising a carrier; (C) a soil composition capable of **inhibiting** chitinase sensitive plant pathogens comprising bacteria transformed with a nucleic acid encoding a chitinase, the nucleic acid being isolated from a heterologous source, whereby the bacteria is capable of expressing the nucleic acid; (D) a bacterial cell having chitinase activity comprising a heterologous nucleic acid encoding the chitinase activity, whereby the bacterial cell expresses the nucleic acid, the bacterial cell being selected from Pseudomonas sp., E. coli and Erwinia sp; (E) a pure nucleic acid sequence being isolated from a source organism and which comprises a segment that encodes for chitinase activity or is homologous to a nucleic acid sequence isolated from a source organism and encoding for chitinase activity.

USE - The products can be used to enhance **plant growth** by biological control of plant pathogens such as fungi, nematodes, insects and disease agents. Plants transformed with the chitinase DNA can also have resistance to frost (freezing) damage or **chilling** damage, increased levels of reducing sugars or sweetness in fruits or plants and enhanced post-harvest storage life. The products can also be used for the production of chitinase for use as an antibiotic.

Dwg.0/2

Title Terms: HETEROLOGOUS; CHITINASE; NUCLEIC; ACID; TRANSFORM; BACTERIA; PLANT; INCREASE; PLANT; RESISTANCE; PLANT; PATHOGEN; INCREASE; **CHILL** ; RESISTANCE; INCREASE; SWEET

Derwent Class: C06; D16; P11

International Patent Class (Main): C12N-001/21

International Patent Class (Additional): A01C-001/06; A61K-039/104; C12N-015/56; C12N-015/78

File Segment: CPI; EngPI

12/5/9 (Item 9 from file: 350)

DIALOG(R)File 350:Derwent WPIX

011637907 **Image available**

WPI Acc No: 1998-054815/199806

XRAM Acc No: C98-018931

New N-acetonyl benzamide compounds and acid salt intermediates are biocides e.g. fungicides - used to treat e.g. Phytophthora infestans, Botrytis cinerea, Pseudoperonospora cubensis, Plasmopara viticola and Piricularia oryzae infections

Patent Assignee: ROHM & HAAS CO (ROHM)

Inventor: MICHELOTTI E L; YOUNG D H

Number of Countries: 026 Number of Patents: 013

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 816331	A1	19980107	EP 97304191	A	19970616	199806	B
AU 9724885	A	19980115	AU 9724885	A	19970616	199809	
JP 10095756	A	19980414	JP 97187243	A	19970630	199825	
BR 9703762	A	19981110	BR 973762	A	19970627	199850	
KR 98002024	A	19980330	KR 9728324	A	19970627	199902	

CA 2207997	A	19971228	CA 2207997	A	19970616	199916	
MX 9704837	A1	19971201	MX 974837	A	19970626	199936	
US 5929098	A	19990727	US 9620517	P	19960628	199936	
			US 97877939	A	19970618		
EP 816331	B1	20000524	EP 97304191	A	19970616	200030	
DE 69702094	E	20000629	DE 602094	A	19970616	200038	
			EP 97304191	A	19970616		
TW 381004	A	20000201	TW 97108378	A	19970617	200048	N
AU 725406	B	20001012	AU 9724885	A	19970616	200055	
MX 202127	B	20010530	MX 974837	A	19970626	200227	

Priority Applications (No Type Date): US 9620517 P 19960628; US 97877939 A 19970618; TW 97108378 A 19970617

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 816331	A1	E	23	C07C-237/32	
Designated States (Regional): AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE					
AU 9724885	A			A01N-037/20	
JP 10095756	A		22	C07C-233/76	
BR 9703762	A			C07C-233/00	
KR 98002024	A			C07D-213/60	
CA 2207997	A			C07C-237/32	
MX 9704837	A1			C07C-233/25	
US 5929098	A			C07C-331/12	Provisional application US 9620517
EP 816331	B1	E		C07C-237/32	
Designated States (Regional): DE FR GB IT					
DE 69702094	E			C07C-237/32	Based on patent EP 816331
TW 381004	A			A01N-037/20	
AU 725406	B			C07C-237/32	Previous Publ. patent AU 9724885
MX 202127	B			A01N-037/26	

Abstract (Basic): EP 816331 A

N-acetonylbenzamide compounds of formula (I) and their salts and ketopropylamine acid salts of formula (II) are new. A = N or CR5; R1, R2 = H, 1-6C alkyl, 1-6C haloalkyl, 2-6C alkenyl or 2-6C alkynyl, provided that one of R1 and R2 is not H; R3-R5 = H, halo, CN, 1-6C alkyl, 1-6C haloalkyl, 2-6C alkenyl, 2-6C alkynyl, 1-6C alkoxy, 1-6C haloalkoxy, NO2, carboxy, NR6R7, CR8=NOR9, NHCOOR8 or CONR10R11, provided that at least one of R3-R5 = NR6R7; R6, R7 = H, 1-6C alkyl or 1-6C alkylcarbonyl; R8 = H, 1-6C alkyl, 2-6C alkenyl, 2-6C alkynyl or 1-6C alkylcarbonyl(1-4C) alkyl; R9 = H, 1-6C alkyl, 2-6C alkenyl, 2-6C alkynyl or 1-4C alkylcarbonyl; R10, R11 = H, 1-6C alkyl, 2-6C alkenyl or 2-6C alkynyl; X, Y, Z = H, halo, CN, thiocyano, isothiocyano or 1-6C alkylsulphonyloxy, provided that at least one of X, Y, Z is not H; AH = organic or inorganic acid.

USE - (I) and (II) are fungicides used to control phytopathogenic fungi by application to **plant** foliage, seeds or **growth** media. (II) are further used to **inhibit** growth of bacteria or algae (all claimed). (I) and (II) are particularly useful in controlling fungi of the class Oomycetes and are also slimicides suitable for use in e.g. water **cooling** systems, swimming pools, paper pulp processes, aqueous polymer dispersions and water-based parts. They are also used as fabric and leather preservatives, cosmetic preservatives, soap additives, metal working fluids (e.g. cutting oils) and as preservatives for various materials (e.g. fuels). (II) are intermediates for (I). (I) and (II) are applied at a rate of 0.5-500 g/50 kg **seed** as a **seed coating** , 0.5-20 (preferably 1-5) kg/ha as a soil fungicide and 0.01-20 (preferably 0.125-0.5) kg/ha to foliage as a spray.

ADVANTAGE - (I) and (II) have high fungicidal activity and relatively low phytotoxicity.

Dwg.0/0

Title Terms: NEW; N; ACETONYL; BENZAMIDE; COMPOUND; ACID; SALT;

INTERMEDIATE; BIOCIDE; FUNGICIDE; TREAT; PHYTOPHTHORA; INFESTANS; BOTRYTIS; CINEREA; VITICOLA; PIRICULARIA; ORYZAE; INFECT
Derwent Class: A60; C02; C03; D15; D18; D21; D22; E13; E14; F06; F09; H06; H08; M21
International Patent Class (Main): A01N-037/20; A01N-037/26; C07C-233/00; C07C-233/25; C07C-233/76; C07C-237/32; C07C-331/12; C07D-213/60
International Patent Class (Additional): A01N-035/02; A01N-037/18; A01N-037/34; A01N-037/44; A01N-037/48; A01N-041/04; A01N-043/40; A01N-047/20; A01N-047/46; A01N-047/48; C07C-225/06; C07C-235/46; C07C-237/42; C07C-251/48; C07C-255/29; C07C-255/57; C07C-271/28; C07C-309/65; C07C-331/04; C07C-331/20; C07D-213/02; C07D-213/24; C07D-213/38; C07D-213/61; C07D-213/72; C07D-213/81; C07D-213/82; C07D-213/89
File Segment: CPI

12/5/10 (Item 10 from file: 350)
DIALOG(R)File 350:Derwent WPIX

004321142
WPI Acc No: 1985-148020/198525
XRAM Acc No: C85-064374
XRPX Acc No: N85-111671
Coating seeds **with low m.pt. polyester - giving strongly adherent coating removable by water and promoting** germination **in culture medium**
Patent Assignee: SOLVAY & CIE (SOLV)
Inventor: DETROZ R; GAGO I
Number of Countries: 016 Number of Patents: 012
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 145086	A	19850619	EP 84201769	A	19841130	198525	B
FR 2556173	A	19850614	FR 8319983	A	19831212	198530	
AU 8436541	A	19850620				198532	
JP 60145005	A	19850731	JP 84262658	A	19841212	198537	
BR 8406342	A	19851008				198603	
ES 8601639	A	19860301	ES 538480	A	19841211	198619	
US 4735017	A	19880405	US 84679355	A	19841207	198816	
EP 145086	B	19881109				198845	
DE 3475039	G	19881215				198851	
US 4879839	A	19891114	US 88177168	A	19880404	199004	
CA 1288967	C	19910917				199145	
JP 92081407	B	19921224	JP 84262658	A	19841212	199304	

Priority Applications (No Type Date): FR 8319983 A 19831212
Cited Patents: A3...8527; FR 1395106; No-SR.Pub; US 3113399; US 3803761; US 3852913
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 145086	A	F	15		
Designated States (Regional): AT BE CH DE FR GB IT NL SE					
EP 145086	B	F			
Designated States (Regional): AT BE CH DE FR GB IT LI NL SE					
JP 92081407	B		9	A01C-001/06	Based on patent JP 60145005

Abstract (Basic): EP 145086 A
Seeds are **coated** with a polyester of low m.pt., pref. an E-caprolactone polymer, and pref. also contg. phytosanitary prods., a fungicide and bacterias which promote **germination** and **growth** of **plants** .
Pref. the coating is used in amt. of 0.01-100 wt% w.r.t. uncoated **seed** , the **coating** itself contg. 80-100 wt% polyesters.
ADVANTAGE - The coating is mechanically strong and adheres firmly

to the seed, thus resulting in excellent storage life of the **coated seed** . The **coating** is removed under the action of moisture or water when the seed is put into the culture medium. It has no phytotoxic effect, **prevents** premature **germination** of the seed and, when it contains active additives, allows their slow release. Prepn. of the **coated seeds** does not involve the use of water thus **avoiding** the drawbacks which such use entails.

0/0

Title Terms: COATING; SEED; LOW; POLYESTER; STRONG; ADHERE; COATING; REMOVE ; WATER; PROMOTE; **GERMINATE** ; CULTURE; MEDIUM

Derwent Class: A97; C03; G02; P11

International Patent Class (Main): A01C-001/06

File Segment: CPI; EngPI

16/5/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

03573803
PELLET-LIKE SEED AND SEED BLOCK FOR DIRECT **SOWING** UTILIZING THEREOF

PUB. NO.: 03-236703 [JP 3236703 A]
PUBLISHED: October 22, 1991 (19911022)
INVENTOR(s): OSHIMA MASARU
APPLICANT(s): OSHIMA MASARU [000000] (An Individual), JP (Japan)
APPL. NO.: 02-033389 [JP 9033389]
FILED: February 13, 1990 (19900213)
INTL CLASS: [5] A01C-001/06; A01C-001/04
JAPIO CLASS: 11.1 (AGRICULTURE -- Agriculture & Forestry)
JOURNAL: Section: C, Section No. 902, Vol. 16, No. 20, Pg. 68, January 20, 1992 (19920120)

ABSTRACT

PURPOSE: To improve germination of seed and establishment of seedling by using a specific material to dipped unhulled rice as a seed.

CONSTITUTION: An unhulled rice 11 is prepared as a seed and following A, B, C and D are prepared. A: a porous material such as boiling bubble stone, B: a black material or a coloring material (active carbon or Fe(sub 3)O(sub 4)) having excellent heat absorption and heat conduction, etc., C: oxygen donor such as Fe(sub 3)O(sub 4) or calcium peroxide and D: coagulant such as calcium sulfate (calcined gypsum). Said A, H, C and D are mixed and applied on the unhulled rice 11 (dipped unhulled rice) to form a **coated layer** 12. Namely, **seed** separated from **water** is put on a dish of a coating machine and the mixing material is slowly added with rotating the machine to uniformly **coat** on the **seed** with spraying a small amount of water. By said method, heat absorption, heat conduction and supplying of oxygen to the seed are increased to improve germination of the seed and establishment of seedling under the conditions of a **low temperature** and soil covering.

16/5/2 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013817757 **Image available**
WPI Acc No: 2001-301969/200132
Related WPI Acc No: 1993-128046
XRAM Acc No: C01-092881
Use of fungicides to control Take-All disease in plants, particularly cereals, by administering it to the plant **locus, its** seed **or the soil**
Patent Assignee: MONSANTO CO (MONS)
Inventor: BRACCOLINO D S; GRANETO M J; PHILLION D P; PHILLIPS W G; VAN SANT K A; WALKER D M; WONG S C
Number of Countries: 017 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
EP 1088481	A2	20010404	EP 92870168	A	19921016	200132 B
			EP 2000124212	A	19921016	

Priority Applications (No Type Date): US 92951997 A 19921002; US 91780683 A 19911018
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1088481	A2	E	68	A01N-055/00	Div ex application EP 92870168

Designated States (Regional): AT BE CH DE DK ES FR GB GR IE IT LI LU MC NL PT SE

Abstract (Basic): EP 1088481 A2

NOVELTY - A method of controlling disease in a plant caused by Gaeumannomyces sp. comprises applying a fungicide (I) or its salt, to the plant locus.

DETAILED DESCRIPTION - A method of controlling disease in a plant caused by Gaeumannomyces sp. comprises applying a fungicide of formula (I) or its salt, to the plant locus.

Z1, Z2=C or N and are part of an aromatic ring selected from benzene, pyridine, furan, pyrrole, pyrazole, thiazole and isothiazole;

A=-C(X)-amine, -C(O)-SR3, -NH-C(X)R4 and -C(=NR3)-XR7;

B=-Wm-Q(R2)3 or selected from o-tolyl, 1- naphthyl, 2- naphthyl and 9-phenanthryl, each optionally substituted with halo or R4;

Q=C, Si, Ge or Sn;

W=-C(R3)pH(2-p)- or when Q is C, W is selected from -C(R3)pH(2-p)-, -N(R3)mH(1-m)-, -S(O)p- or -O-;

X=O or S;

n=0-2, or when Z1 and Z2 are part of a benzene, pyrrole, pyridine or pyrazole ring, n is also 3;

m=0-1;

p=0-2

each R=selected from (a) halo, formyl, cyano, amino, nitro, thiocyanato, trimethylsilyl or hydroxy; (b) 1-4C alkyl, alkenyl, alkynyl, 3-6C cycloalkyl or cycloalkenyl, each optionally substituted with halo, hydroxy, thio, amino, nitro, cyano, formyl, phenyl, 1-4C alkoxy, alkylcarbonyl, alkylthio, alkylamino, dialkylamino, alkoxycarbonyl, (alkylthio)carbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylsulfinyl or alkylsulfonyl; (c) phenyl, furyl, thienyl, pyrrolyl, each optionally substituted with halo, formyl, cyano, amino, nitro, 1-4C alkyl, alkenyl, alkynyl, alkoxy, alkylthio, alkylamino, dialkylamino, haloalkyl and haloalkenyl; and (d) 1-4C alkoxy, alkenoxy, alkynoxy, 3-6C cycloalkyloxy, cycloalkenyloxy, alkylthio, alkylsulfinyl, alkylsulfonyl, alkylamino, dialkylamino, alkylcarbonylamino, aminocarbonyl, alkylaminocarbonyl, dialkylaminocarbonyl, alkylcarbonyl, alkylcarbonyloxy, alkoxycarbonyl, (alkylthio)carbonyl, phenylcarbonylamino, phenylamino, each optionally substituted with halo; where two R groups may be combined to form a fused ring; each R2 is selected from alkyl, alkenyl, alkynyl, cycloalkyl, cycloalkenyl and phenyl, each optionally substituted with R4 or halo; and when Q is C, R2 may also be selected from alkoxy, alkylthio, alkylamino and dialkylamino; where two R2 groups may be combined to form a cyclo group with Q; R3 is 1-4C alkyl, R4 is 1-4C alkyl, haloalkyl, alkoxy, alkoxy, alkylthio, alkylamino, or dialkylamino and R7 is 1-4C alkyl, haloalkyl, or phenyl, optionally substituted with halo, nitro or R4.

An INDEPENDENT CLAIM is included for compounds of formula (I) as used above, with

W=-C(R3)pH(2-p)- when Q is Si, Ge or Sn; or when Q is C, W is selected from -N(R3)mH(1-m)-, -S(O)p- or -O-;and

the provisos that:

(1) if Z1 and Z2 are part of a benzene ring,

(i) n is not zero when B is trimethylsily and A is N, N-diethylaminocarbonyl, N,N-bis(1-methylethyl)aminocarbonyl, N-methylaminothiocarbonyl, N-ethylaminocarbonyl, 1-piperidinylcarbonyl, or N-phenylaminocarbonyl; or when B is o-tolyl and A is N,N-diethylaminocarbonyl, N,N-bis(1-methylethyl)aminocarbonyl, N-methyl-aminocarbonyl, or O-methylcarbamyl; or when B is trimethylstannyl and A is N,N-diethylamino-carbonyl or O-(1,1-dimethylethyl)carbamyl;

(ii) when B is 2-trimethylsilyl and A is N,N-diethylaminocarbonyl,

Rn is not 3-fluoro-6-formyl, 3-fluoro-6-methyl, 3-chloro-6-formyl, 3-fluoro, 3-chloro, 3-chloro-6-methyl, 6-trimethylsilyl, 5-methyl, 6-methyl, 3-methoxy, 3,4-dimethoxy, 6-methoxy, 6-formyl, 6-phenylamino, 3-bromo-6-methoxy, 3-methoxy-6-trimethylsilyl, 3-methoxy-6-formyl, 3-methoxy-6-methyl, 3-methoxy-6-amino carbonyl, 3-methoxy-6-methylthio, 3-methoxy-6-iodo, 3-methoxy-4-methoxy-6-methyl or 3-methoxy-4-methoxy-6-formyl;

(iii) when A is O-(1,1-dimethylethyl)carbamyl and B is 2-trimethylsilyl, Rn is not 5-trifluoromethyl;

(iv) when A is -C(O)-amine and Wm is -O-, R is not isothiocyanato; and

(v) when A is N-phenylaminocarbonyl and B is 2,2-dimethylpropyl, Rn is not 3-methyl; and

(2) if Z1 and Z2 are part of a pyridine, thiophene, furan, pyrrole, pyrazole, thiazole, or isothiazole ring, B is not trimethylsilyl when A is (diethylamino)carbonyl; and further providing that when A is N-methoxyaminocarbonyl or N,N-diethylaminocarbonyl, B is not trimethylsilylmethyl.

ACTIVITY - Antifungal.

Compounds were tested for control of Gaeumannomyces graminis on Bergen or Anza varieties of wheat, grown in 3-inch square pots containing soil infested with Gaeumannomyces graminis. A treatment rate of 0.5 mg active ingredient/pot was used, treating each pot with 3 ml test solution. 5 compounds gave 100% control in vivo, e.g. 2-chloro-N-(1-methylethyl)-6-(trimethylsilyl)benzamide.

MECHANISM OF ACTION - None given.

USE - (I) may be used to control Gaeumannomyces graminis diseases, including Take-All disease in plants, particularly cereals.

pp; 68 DwgNo 0/0

Title Terms: FUNGICIDE; CONTROL; DISEASE; PLANT; CEREAL; ADMINISTER; PLANT; LOCUS; SEED; SOIL

Derwent Class: C03

International Patent Class (Main): A01N-055/00

International Patent Class (Additional): A01N-037/18; A01N-037/26; A01N-037/40; A01N-037/44; A01N-041/10; A01N-055/02; C07C-233/66; C07C-233/69; C07C-235/60; C07C-237/30; C07C-317/44; C07C-323/60; C07F-007/08; C07F-007/22; C07F-007/30

File Segment: CPI

16/5/3 (Item 2 from file: 350)

DIALOG(R)File 350:Derwent WPIX

013653603 **Image available**

WPI Acc No: 2001-137815/200114

XRAM Acc No: C01-040446

XRPX Acc No: N01-100399

Composition for reducing deposition of mineral salt from aqueous **supersaturated** solution **on solid surfaces such as pipes, comprises dispersed seed crystals of mineral salt and salt isomorphous with mineral salt**

Patent Assignee: ASYMPTOTE LTD (ASYM-N); BP EXPLORATION OPERATING CO LTD (BRPE)

Inventor: ACTON E; MORRIS G J

Number of Countries: 093 Number of Patents: 004

Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200079095	A1	20001228	WO 2000GB2368	A	20000619	200114	B
AU 200055481	A	20010109	AU 200055481	A	20000619	200122	
BR 200011851	A	20020305	BR 200011851	A	20000619	200225	
			WO 2000GB2368	A	20000619		
EP 1190157	A1	20020327	EP 2000940561	A	20000619	200229	

Priority Applications (No Type Date): GB 9914398 A 19990622

Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200079095	A1	E	47	E21B-037/06	
	Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY CA CH CN CR CU CZ DE DK DM DZ EE ES FI GB GD GE GH GM HR HU ID IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW				
	Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TZ UG ZW				
AU 200055481	A			E21B-037/06	Based on patent WO 200079095
BR 200011851	A			E21B-037/06	Based on patent WO 200079095
EP 1190157	A1	E		E21B-037/06	Based on patent WO 200079095
	Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI				

Abstract (Basic): WO 200079095 A1

NOVELTY - The composition for reducing mineral salt deposition on solid surface in contact with **aqueous** supersaturated **solution** (ASS) comprises seed crystal minerals salt in **aqueous solution** or seed crystals of salt isomorphous with mineral salt in **aqueous solution** . The dispersed seed crystals have mean particle size of less than 2.5 microns.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for an apparatus for effecting controlled mineral salt deposition comprises a crystal seed generator chamber (4) having an inlet for ASS or first inlet (3) for a first aqueous precursor liquid of ASS, second inlet (17) for aqueous precursor liquid of ASS, an unit for forming cavitation in solution to enable crystallization, outlet (13) for dispersing seed crystals, passage line for passing dispersion from generator chamber to a mixing chamber (11) comprising first inlet for dispersion, second inlet for ASS or aqueous precursor liquid, mixing unit (14) and outlet.

USE - For reducing deposition of mineral salts such as carbonate and/or sulfate of earth metals e.g. calcium, strontium, barium or magnesium from ASS on solid surfaces such as pipes and rollers used in petrochemical industry, power generating unit, paper/pulp manufacturing plant and processing equipment.

ADVANTAGE - Scaling or deposition of mineral salts on solid surfaces is reduced remarkably by usage of composition comprising mineral salt seed crystals. The thermodynamically stable seed crystals reduce blockage of surfaces, accelerates rate of precipitation of mineral salt from ASS and reduces contact time of solid surface and ASS. The seed crystal in the composition does not have active growth sites and hence does not grow bigger even when placed in ASS. The seed crystal has maximum mass, minimum size and desired crystal morphology.

DESCRIPTION OF DRAWING(S) - The figure shows the schematic flow diagram of scaling reduction process.

Inlets (3,17)
Seed crystal generator chamber (4)
Passage line (6)
Mixing chamber (11)
Outlet (13)
Mixing unit (14)
pp; 47 DwgNo 1/13

Title Terms: COMPOSITION; REDUCE; DEPOSIT; MINERAL; SALT; AQUEOUS; SUPERSATURATED; SOLUTION; SOLID; SURFACE; PIPE; COMPRISE; DISPERSE; SEED; CRYSTAL; MINERAL; SALT; SALT; ISOMORPHOUS; MINERAL; SALT

Derwent Class: D15; F09; H01; Q49

International Patent Class (Main): E21B-037/06

International Patent Class (Additional): B01D-009/00; C02F-005/06

File Segment: CPI; EngPI

16/5/4 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012581587
WPI Acc No: 1999-387694/199933
XRAM Acc No: C99-114232
XRPX Acc No: N99-290519

Preparation of chicory inulin using conventional methods, useful in foods, feeds, prophylactics and therapeutics

Patent Assignee: TIENSE SUIKERRAFFINADERIJ NV (TIEN-N); TIENSE SUIKERRAFFINADERIJ RAFFINERIE TIR (TIEN-N)
Inventor: DE LEENHEER L; SMITS G
Number of Countries: 033 Number of Patents: 008
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 930317	A1	19990721	EP 98870012	A	19980121	199933	B
WO 9937686	A1	19990729	WO 99EP155	A	19990113	199937	
ZA 9900326	A	19990929	ZA 99326	A	19990118	199947	
AU 9921650	A	19990809	AU 9921650	A	19990113	200001	
EP 1049723	A1	20001108	EP 99901596	A	19990113	200062	
			WO 99EP155	A	19990113		
BR 9902934	A	20010306	BR 992934	A	19990719	200118	N
CN 1288472	A	20010321	CN 99802251	A	19990113	200137	
MX 9906721	A1	20010101	MX 996721	A	19990719	200166	N

Priority Applications (No Type Date): EP 98870012 A 19980121; BR 992934 A 19990719; MX 996721 A 19990719
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 930317	A1	E	22	C08B-037/18	
Designated States (Regional): AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
WO 9937686	A1	E		C08B-037/18	
Designated States (National): AU CN IN TR US					
Designated States (Regional): AT BE CH CY DE DK ES FI FR GB GR IE IT LU MC NL PT SE					
ZA 9900326	A		45	C08B-000/00	
AU 9921650	A			C08B-037/18	Based on patent WO 9937686
EP 1049723	A1	E		C08B-037/18	Based on patent WO 9937686
Designated States (Regional): CY ES FR GB GR IT PT					
BR 9902934	A			C08B-037/18	
CN 1288472	A			C08B-037/18	
MX 9906721	A1			C08B-037/18	

Abstract (Basic): EP 930317 A1

NOVELTY - Preparation of chicory inulin using chicory grown so that it is not exposed to **low temperatures** .

DETAILED DESCRIPTION - Preparation of chicory inulin by conventional methods using chicory roots grown under appropriate climatological conditions and in appropriate regions is new. The conditions are such that:

(A) during a period of at least from the beginning of the third month of the growing period until the end of processing of the roots, the FEH gene has not been triggered by **low temperature** ;

(B) the roots have had a growing period of at least 150 days;

(C) the chicory has been seeded in the northern hemisphere between December 1 and March 4, between May 15 and May 31 or between June 1 and November 30; or in the southern hemisphere between June 1 and September 14, between September 15 and September 30, between October 1 and November 30 or between December 1 and May 31.

INDEPENDENT CLAIMS are included for:

(1) preparation of partial and complete hydrolysates or derivatives of chicory inulin by conventional techniques, using chicory as above;

(2) improved standard grade chicory inulin with an inulin content of at least 92 wt.%, a maximum total glucose, fructose and sucrose content of 8 wt.% and with a mean DP (taken over at least 60 days) of at least 12, obtained by the above process;

(3) improved low sugar standard grade chicory inulin with an inulin content of more than 99 wt.%, a maximum total glucose, fructose and sucrose content of 1 wt.% and with a mean DP (taken over at least 60 days) of at least 12, obtained by the above process;

(4) improved high performance grade chicory inulin free from low molecular monomeric saccharides, dimeric saccharides, oligofructose, colorings, salts, proteins, organic acids and technological aids, with a mean DP (taken over at least 60 days) of at least 20, obtained by the above process;

(5) improved polydisperse oligofructose composition containing at least 90 wt.% dry substance and with a DP of 2-10, obtained by the above process; and

(6) improved fructose composition containing at least 89 % fructose and with a fructose/glucose ratio of at least 9/1, obtained as above.

USE - The inulins are used in foods, feeds, drinks, prophylactics or therapeutics (claimed). Inulin may be used to improve texture and mouthfeel, to increase body and give a smooth creamy texture to low-fat products, to improve the stability of emulsions, dispersions, mousses, foams and creams, as a low calorie fat or sugar replacement, as a texturizing agent, as a source of dietary fiber, to stimulate growth, metabolism and activity of bifidobacteria and reducing those of undesirable bacteria, to improve lipid metabolism, **prevent** breast and colon cancer, to improve calcium uptake to increase bone density, for treatment of osteoporosis, as intermediates for oligofructose and fructose products and in the manufacture of chemicals.

ADVANTAGE - The process gives improved quality inulin in an economical process

pp; 22 DwgNo 0/0

Title Terms: PREPARATION; CHICORY; INULIN; CONVENTION; METHOD; USEFUL; FOOD ; FEED; PROPHYLACTIC; THERAPEUTIC

Derwent Class: B04; D13; D17; P13

International Patent Class (Main): C08B-000/00; C08B-037/18

International Patent Class (Additional): A01G-001/00; A23L-001/09; A61K-031/733

File Segment: CPI; EngPI

19/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014471319
WPI Acc No: 2002-292022/200233
Related WPI Acc No: 2001-266398; 2001-335977; 2001-335978; 2001-335979; 2001-335996; 2001-335999; 2001-336000
XRAM Acc No: C02-085774
XRPX Acc No: N02-228003

An isolated or recombinant polynucleotide used to produce a transgenic plant

Patent Assignee: ADAM L (ADAM-I); CREELMAN R (CREE-I); DUBELL A J (DUBE-I); HEARD J (HEAR-I); JIANG C (JIAN-I); KEDDIE J (KEDD-I); MENDEL BIOTECHNOLOGY INC (MEND-N); PILGRIM M (PILG-I); PINEDA O (PINE-I); RATCLIFF O (RATC-I); REUBER J L (REUB-I); RIECHMANN J L (RIEC-I); YU G (YUGG-I)
Inventor: ADAM L; CREELMAN R; DUBELL A J; HEARD J; JIANG C; KEDDIE J; PILGRIM M; PINEDA O; RATCLIFF O; REUBER J L; RIECHMANN J L; YU G
Number of Countries: 097 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
WO 200215675	A1	20020228	WO 2001US26189	A	20010822	200233	B

Priority Applications (No Type Date): US 2001837944 A 20010416; US 2000227439 P 20000822; US 2000713994 A 20001116
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
WO 200215675	A1	E	866	A01H-005/00	

Designated States (National): AE AG AL AM AT AU AZ BA BB BG BR BY BZ CA CH CN CO CR CU CZ DE DK DM DZ EC EE ES FI GB GD GE GH GM HR HU ID IL IN IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MA MD MG MK MN MW MX MZ NO NZ PH PL PT RO RU SD SE SG SI SK SL TJ TM TR TT TZ UA UG US UZ VN YU ZA ZW
Designated States (Regional): AT BE CH CY DE DK EA ES FI FR GB GH GM GR IE IT KE LS LU MC MW MZ NL OA PT SD SE SL SZ TR TZ UG ZW

Abstract (Basic): WO 200215675 A1

NOVELTY - An isolated or recombinant polynucleotide with a fully defined sequence given in the specification, is new.

DETAILED DESCRIPTION - An isolated or recombinant polynucleotide with a sequence selected from:

(a) a nucleotide sequence (I) encoding a polypeptide, comprising from 1-232 amino acids from a 268 amino acid sequence fully defined in the specification;

(b) a nucleotide sequence (II) encoding a polypeptide, comprising a conservatively substituted variant of (I);

(c) a complementary nucleotide sequence (III) of (I);

(d) a nucleotide sequence (IV) comprising one or more silent substitutions in (II);

(e) a nucleotide sequence (V) that hybridizes under stringent conditions to one or more of I-IV;

(f) a nucleotide sequence (VI) comprising at least 15 consecutive nucleotides outside of a conserved domain of any of I-V;

(g) a nucleotide sequence (VII) comprising a subsequence or fragment of any of (I-VI), which subsequence or fragment encodes a polypeptide that modifies one or more of a plant's traits;

(h) a nucleotide sequence (VIII) having at least 31% sequence identity to I-VII;

(i) a nucleotide sequence (IX) having at least 60% sequence identity to I-VII;

(j) a nucleotide sequence (X) having at least 95% sequence identity to I-VII;

(k) a nucleotide sequence (XI) encoding a polypeptide having at

least 31% sequence identity outside of a conserved domain of (I);
(l) a nucleotide sequence (XII) encoding a polypeptide having at least 60% sequence identity outside of a conserved domain of (I);
(m) a nucleotide sequence (XIII) encoding a polypeptide having at least 75% sequence identity outside of a conserved domain of (I);
(n) a nucleotide sequence (XIV) encoding a polypeptide having at least 95% sequence identity outside of a conserved domain of (I);
(o) a nucleotide sequence (XV) encoding a polypeptide having an amino acid domain with at least 86% sequence identity to a conserved domain of (I);
(p) a nucleotide sequence (XVI) encoding a polypeptide having an amino acid domain with at least 90% sequence identity to a conserved domain of (I);
(q) a nucleotide sequence (XVII) encoding a polypeptide having an amino acid domain with at least 95% sequence identity to a conserved domain of (I);
(r) a nucleotide sequence (XVIII) encoding a polypeptide having an amino acid domain with at least 98% sequence identity to a conserved domain of (I);
(s) a nucleotide sequence (XIX) having at least 31% sequence identity over the entire length of (I);
(t) a nucleotide sequence (XX) having at least 60% sequence identity over the entire length of (I);
(u) a nucleotide sequence (XXI) having at least 75% sequence identity over the entire length of (I);
(v) a nucleotide sequence (XXII) having at least 95% sequence identity over the entire length of (I);
where the plant possesses an altered trait as compared to a wild-type or reference plant, or the plant exhibits an altered phenotype as compared to a wild-type or reference plant, or the plant exhibits ectopic expression or altered expression of one or more genes associated with a plant trait as compared to a wild plant.
INDEPENDENT CLAIMS are also included for the following:
(1) a transgenic plant comprising I-XXII;
(2) producing a transgenic plant;
(3) an isolated or recombinant polypeptide;
(4) an isolated or recombinant polynucleotide with one of 44 fully defined sequences given in the specification;
(5) a computer readable medium having stored sequence information;
(6) identifying a homolog sequence (M1) from a database comprising a plurality of known plant sequences comprising inputting sequence information selected from one of 464 fully defined sequences given in the specification; and
(7) a homolog identified by M1.
USE - Using the isolated or recombinant polynucleotide for producing a plant having a modified trait, the method comprising selecting a polynucleotide that encodes a polypeptide or an antisense nucleic acid, inserting the polynucleotide or antisense nucleic acid into an expression vector, introducing the vector into a plant or a cell of a plant to overexpress the polypeptide or antisense nucleic acid, thereby producing a modified plant, and selecting for a modified trait (claimed).
pp; 866 DwgNo 0/0
Title Terms: ISOLATE; RECOMBINATION; POLYNUCLEOTIDE; PRODUCE; TRANSGENIC; PLANT
Derwent Class: C06; D16; P13
International Patent Class (Main): A01H-005/00
International Patent Class (Additional): C12N-015/82; C12P-021/00
File Segment: CPI; EngPI

19/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

014204034 **Image available**
WPI Acc No: 2002-024731/200203
Related WPI Acc No: 2001-025424
XRAM Acc No: C02-006836

Capacitive radio frequency dielectric heating of packaged food product, involves applying radio frequency signal of specific high frequency that correspond to Debye resonance frequency, for heating food product

Patent Assignee: UNIV OREGON HEALTH SCI (UYOR-N)
Inventor: FLUGSTAD B A; KOLBE E R; PARK J W; WELLS J H; ZHAO Y
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week
US 6303166	B1	20011016	US 9882586	A	19980421	200203 B
			US 99295666	A	19990421	

Priority Applications (No Type Date): US 9882586 P 19980421; US 99295666 A 19990421
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
US 6303166	B1		19	A23B-006/00	Provisional application US 9882586

Abstract (Basic): US 6303166 B1

NOVELTY - Capacitive radiofrequency dielectric heating of a packaged food product (A) comprises sandwiching (A) between electrodes (20,22) to which AC electric field is applied by a selected radiofrequency signal of not greater than 300 MHz that corresponds to a Debye resonance frequency for a time sufficient to heat the food product.

DETAILED DESCRIPTION - An INDEPENDENT CLAIM is also included for method for killing undesired organism associated with food product.

USE - Used for capacitive radiofrequency dielectric heating for pasteurization, sterilization of packaged food products such as alfalfa, radish, carrot seeds, beef frankfurter and surimi seafoods. The method is used for sterilization and/or pasteurization of **seeds** packaged in edible and polymer **films** , to improve **germination** rates of **seeds** through pretreatment of seeds prior to planting and sprouting with capacitive RF dielectric heating.

ADVANTAGE - Heating to pasteurization and sterilization **temperature** can be rapid, resulting in **lower** degradation to food quality. Heating rates can be increased by matching the generator frequency or composite of frequencies of the RF signal to the Debye resonance frequency groups of various head media, hence increasing overall energy efficiency.

DESCRIPTION OF DRAWING(S) - The figure shows a schematic diagram of the capacitive RF dielectric heating system.

Electrodes (20,22)
Food product (A)
pp; 19 DwgNo 1/8

Title Terms: CAPACITANCE; RADIO; FREQUENCY; DIELECTRIC; HEAT; PACKAGE; FOOD ; PRODUCT; APPLY; RADIO; FREQUENCY; SIGNAL; SPECIFIC; HIGH; FREQUENCY; CORRESPOND; DEBYE; RESONANCE; FREQUENCY; HEAT; FOOD; PRODUCT
Derwent Class: D13
International Patent Class (Main): A23B-006/00
File Segment: CPI

19/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011402120 **Image available**
WPI Acc No: 1997-380027/199735

XRAM Acc No: C97-121806
XRPX Acc No: N97-316211

Seed germination processing method - involves maintaining gel coated seeds at low temperature **until sowing**

Patent Assignee: YAZAKI CORP (YAZA)
Number of Countries: 001 Number of Patents: 001
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
JP 9163818	A	19970624	JP 95328636	A	19951218	199735	B

Priority Applications (No Type Date): JP 95328636 A 19951218
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
JP 9163818	A		5	A01C-001/00	

Abstract (Basic): JP 9163818 A

Seed germination processing involves **coating** gel layer to **seeds** . The gel **coated seeds** are then maintained at **low temperature** until sowing.

ADVANTAGE - Enables to sow seeds under suitable weather. Improves quality of seeds. Improves gel layer coating efficiency.

Dwg.1/6

Title Terms: SEED; GERMINATE; PROCESS; METHOD; MAINTAIN; GEL; COATING; SEED ; LOW; TEMPERATURE; SOW
Derwent Class: C07; P11
International Patent Class (Main): A01C-001/00
International Patent Class (Additional): A01C-001/06
File Segment: CPI; EngPI

22/5/1 (Item 1 from file: 347)
DIALOG(R)File 347:JAPIO

05549018
SIMULTANEOUS **GERMINATION** TREATMENT OF GEL-COATED SEEDS

PUB. NO.: 09-163818 [JP 9163818 A]
PUBLISHED: June 24, 1997 (19970624)
INVENTOR(s): KOBAYASHI YOKO
AKIYAMA SETSUKO
APPLICANT(s): YAZAKI CORP [351584] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 07-328636 [JP 95328636]
FILED: December 18, 1995 (19951218)
INTL CLASS: [6] A01C-001/00; A01C-001/06
JAPIO CLASS: 11.1 (AGRICULTURE -- Agriculture & Forestry)

ABSTRACT
PROBLEM TO BE SOLVED: To provide a method for the simultaneous **germination** treatment of gel-coated seeds, enabling to sow the gel-coated seeds in the optimal weather time, achieve the highest **germination** rate, and improve the yield and work efficiency by subjecting the gel- **coated seeds** to a **low temperature** treatment in a period between the formation of the gel coat layers on the seeds and the sowing of the gel-coated seeds.

SOLUTION: In a period between the formation of the gel coat layers of an alginate salt, etc., on the seeds of tomato, eggplant, etc., and the sowing of the gel-coated seeds, the gel coated seeds are subjected to a **low temperature** treatment at a **temperature lower** than the lowest **germination temperature** of the **coated** plant **seeds** and higher than temperatures giving low temperature damages to the coated seeds. The gel-coated seeds are preferably stored and preserved at a low temperature until sowed.

22/5/2 (Item 2 from file: 347)
DIALOG(R)File 347:JAPIO

05450911 **Image available**
GERMINATION ACCELERATOR

PUB. NO.: 09-065711 [JP 9065711 A]
PUBLISHED: March 11, 1997 (19970311)
INVENTOR(s): TAZAWA SHINJI
APPLICANT(s): IWASAKI ELECTRIC CO LTD [000019] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 07-245121 [JP 95245121]
FILED: August 31, 1995 (19950831)
INTL CLASS: [6] A01C-001/00; A01C-001/02
JAPIO CLASS: 11.1 (AGRICULTURE -- Agriculture & Forestry)
JAPIO KEYWORD: R007 (ULTRASONIC WAVES)

ABSTRACT
PROBLEM TO BE SOLVED: To provide a **germination** accelerator accelerating water absorption, increasing **germination** rate and suitable for fine and slight seeds, etc., by constructing to treat seeds dipped in water at a **low temperature** , stimulate **seed coat** tissue by ultrasonic wave, illuminate and accelerate **germination** .
SOLUTION: Seeds of Eustoma ruselliannum Griseb., etc., dipped in water are treated at a **low temperature** , **seed coat** tissue is stimulated by ultrasonic wave, and furthermore, intermittently illuminated to accelerate

germination . Preferably, the treating device of ultrasonic wave is composed of an ultrasonic generator 3 disposed inside an outer box 2, an ultrasonic transducer 4 fitted to one end of the ultrasonic generator 3 and an inner box 5 arranged at an upper part of the ultrasonic transducer 4.

22/5/3 (Item 3 from file: 347)
DIALOG(R)File 347:JAPIO

05110608
GERMINATION -IMPROVING METHOD OF LETTUCE SEED

PUB. NO.: 08-066108 [JP 8066108 A]
PUBLISHED: March 12, 1996 (19960312)
INVENTOR(s): HASEGAWA AKIRA
HIRANO HIROSHI
APPLICANT(s): SUMITOMO CHEM CO LTD [000209] (A Japanese Company or Corporation), JP (Japan)
APPL. NO.: 06-205174 [JP 94205174]
FILED: August 30, 1994 (19940830)
INTL CLASS: [6] A01C-001/00
JAPIO CLASS: 11.1 (AGRICULTURE -- Agriculture & Forestry); 14.4 (ORGANIC CHEMISTRY -- Medicine)

ABSTRACT

PURPOSE: To produce lettuce seeds capable of exhibiting a stable high **germination** performance (**germination** speed and **germination** percentage) even under poor conditions such as high **temperature** and **low** illumination, especially **seeds** having high performance suitable for **coated seed** which is apt to be unstable in **germination** owing to coating granulation.

CONSTITUTION: This **germination** improving method for lettuce seeds consists of the following processes; (1) a process for immersing seeds into a cytokinin- containing aqueous solution or contacting seeds with a carrier impregnated with the aqueous solution; (2) a process for contacting the seeds with ethylene gas, immersing the seeds into an aqueous solution containing an ethylene- generating agent, or contacting the seeds with a carrier impregnated with the aqueous solution; and a process for drying the obtained seeds after the treatments with both processes (1) and (2), within 2hr to <=20% in water content. Lettuce seeds having improved **germination** performance is prepared by applying the **germination** improving method.

22/5/4 (Item 4 from file: 347)
DIALOG(R)File 347:JAPIO

03297604
HUSKED SEED FOR CULTURE AND PRODUCTION THEREOF

PUB. NO.: 02-273104 [JP 2273104 A]
PUBLISHED: November 07, 1990 (19901107)
INVENTOR(s): YOSHISUE TATSU
TAKAHAMA MITSUHARU
NOHARA HIROSHI
APPLICANT(s): SANYO SHIYUBIYOU KK [000000] (A Japanese Company or Corporation), JP (Japan)
NOHARA SHIYUBIYOU KK [000000] (A Japanese Company or Corporation), JP (Japan)
TAKAHAMA SANSO KK [000000] (A Japanese Company or Corporation), JP (Japan)

APPL. NO.: 01-259367 [JP 89259367]
FILED: October 04, 1989 (19891004)
INTL CLASS: [5] A01C-001/06
JAPIO CLASS: 11.1 (AGRICULTURE -- Agriculture & Forestry); 14.4 (ORGANIC CHEMISTRY -- Medicine)
JOURNAL: Section: C, Section No. 799, Vol. 15, No. 34, Pg. 143, January 28, 1991 (19910128)

ABSTRACT

PURPOSE: To shorten the **germination** time and improve the uniformity of sprouting and growth by peeling the husk of a **seed** at a **low temperature** and **coating** the husked **seed** with a **coating** agent.

CONSTITUTION: A hard seed of e.g. spinach or buckwheat is treated at an extremely low temperature (<=-5 deg.C, preferably <=-30 deg.C). In the case of using liquefied air or liquefied carbon dioxide gas, etc., as a refrigerant, the liquid is directly sprayed against the seed with a spray nozzle. The frozen and dried seed produced by the above process is husked e.g. by crushing with a rotary roll, high-speed rotary blade, etc. The husked seed is coated with inorganic powder, clay, etc. If necessary, fungicide, insecticide, hormone agent, nutrient, bird-repellent, colorant, etc., are added to the coating agent

27/5/1 (Item 1 from file: 344)
DIALOG(R)File 344:CHINESE PATENTS ABS

4299813
METHOD FOR PREVENTING DEFECTIVE SPROUTING AND GROWING OF PLANT
Patent Assignee: AGRICULTURAL TECHNOLOGY YAZAKI (JP)
Author (Inventor): KAWANO YASUTSUKASA (JP); **KATSUTANI NORITOSHI** (JP
Number of Patents: 023
Patent Family:

CC	Number	Kind	Date	
CN	1329814	A	20020109	(Basic)
AT	1166614	R1	20020102	
BE	1166614	R1	20020102	
CH	1166614	R1	20020102	
CY	1166614	R1	20020102	
DE	1166614	R1	20020102	
DK	1166614	R1	20020102	
EP	1166614	A1	20020102	
ES	1166614	R1	20020102	
FI	1166614	R1	20020102	
FR	1166614	R1	20020102	
GB	1166614	R1	20020102	
GR	1166614	R1	20020102	
IE	1166614	R1	20020102	
IT	1166614	R1	20020102	
JP	2002000011	A2	20020108	
LI	1166614	R1	20020102	
LU	1166614	R1	20020102	
MC	1166614	R1	20020102	
NL	1166614	R1	20020102	
PT	1166614	R1	20020102	
SE	1166614	R1	20020102	
TR	1166614	R1	20020102	
US	2002011025	AA	20020131	

Application Data:

CC	Number	Kind	Date
*JP	2000184401	A	20000620
CN	2001117902	A	20010511

IPC: A01C-001/00

29/5/1 (Item 1 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013789697 **Image available**
WPI Acc No: 2001-273908/200129
XRPX Acc No: N01-195697
Gel- coated **hulled rice** seed **for protecting the seed during handling and** germination **is a hulled rice** seed coated **with an** aqueous gel **-** layer **which includes a preservative to produce a substantially spherical shape gel-** coated seed
Patent Assignee: AGRITECNO YAZAKI CO LTD (AGRI-N); AGRITECHNO YAZAKI KK (AGRI-N)
Inventor: KOBAYASHI Y; **KOHNO Y** ; NISHIYAMA Y
Number of Countries: 004 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
AU 200053638	A	20010308	AU 200053638	A	20000825	200129	B
JP 2001069812	A	20010321	JP 99249837	A	19990903	200132	
CN 1286894	A	20010314	CN 2000126456	A	20000901	200141	
KR 2001067147	A	20010712	KR 200051927	A	20000904	200202	

Priority Applications (No Type Date): JP 99249837 A 19990903
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
AU 200053638	A		15	A23B-009/14	
JP 2001069812	A		4	A01C-001/06	
CN 1286894	A			A01C-001/06	
KR 2001067147	A			A01C-001/06	

Abstract (Basic): AU 200053638 A
NOVELTY - The **aqueous gel - layer** is formed by adding the seed contained within a droplet of **aqueous gel** -forming **solution** , e.g. sodium alginate or sodium polyacrylate, into a coagulating **solution** , e.g. **aqueous solution** of calcium, barium or aluminum chloride. Alternatively, the respective **aqueous solutions** are carboxymethyl cellulose and potassium aluminum sulfate. Preservatives and growth promoting additives can be included in the gel-forming solution.
USE - For coating hulled rice, i.e. rice from which the hull has been removed, to provide physical, chemical and biological protection to the seed.
ADVANTAGE - Gives protection whilst promoting **germination** by feeding water to the seed. After **germination** , the germ and root grow within the **aqueous gel - layer** which prevents damage during mechanical handling and **sowing** . The gel- **coat** also protects the **seed** against disease, e.g. blast or blight, without requiring disinfectant fluid. The gel- **coated seed** can be stored provided that it is immediately dried after production.
DESCRIPTION OF DRAWING(S) - The drawing shows a schematic view of a gel- **coated** hulled rice **seed** .
pp; 15 DwgNo 1/1
Title Terms: GEL; COATING; HULL; RICE; SEED; PROTECT; SEED; HANDLE; **GERMINATE** ; HULL; RICE; SEED; COATING; AQUEOUS; GEL; LAYER; PRESERVE; PRODUCE; SUBSTANTIAL; SPHERE; SHAPE; GEL; COATING; SEED
Derwent Class: P11
International Patent Class (Main): A01C-001/06; A23B-009/14
International Patent Class (Additional): A01C-001/06
File Segment: EngPI

29/5/2 (Item 2 from file: 350)
DIALOG(R)File 350:Derwent WPIX

013655731
WPI Acc No: 2001-139943/200115
XRAM Acc No: C01-041402
XRPX Acc No: N01-102049
Preparation of gel- coated seed **comprises dipping** seed **into gel-forming solution after adhering hardener to seed**
Patent Assignee: AGRITECNO YAZAKI CO LTD (AGRI-N); AGRITECHNO YAZAKI KK (AGRI-N)
Inventor: INOSE K; **KOHNO Y**
Number of Countries: 026 Number of Patents: 002
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 1062855	A2	20001227	EP 2000111227	A	20000525	200115	B
JP 2001008506	A	20010116	JP 99178519	A	19990624	200119	

Priority Applications (No Type Date): JP 99178519 A 19990624
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 1062855	A2	E	6	A01C-001/06	
Designated States (Regional): AL AT BE CH CY DE DK ES FI FR GB GR IE IT LI LT LU LV MC MK NL PT RO SE SI					
JP 2001008506	A		4	A01C-001/06	

Abstract (Basic): EP 1062855 A2
NOVELTY - Preparation of a gel- **coated seed** comprises adhering a hardener for gelatinizing the gel-forming solution to a seed and dipping the seed into a gel-forming solution and after
USE - The gel- **coating** on the **seeds** is used to produce early **germination** , uniform **germination** time and high **germination** rate.
ADVANTAGE - The gel **coating** on the **seed** has uniform thickness and hardness and allows easy **sowing** , good production efficiency and easy mechanization for harvest. No seeds are wasted.
pp; 6 DwgNo 0/0
Title Terms: PREPARATION; GEL; COATING; SEED; COMPRISE; DIP; SEED; GEL; FORMING; SOLUTION; AFTER; ADHERE; HARDEN; SEED
Derwent Class: A11; A14; A32; A97; C04; P11
International Patent Class (Main): A01C-001/06
File Segment: CPI; EngPI

29/5/3 (Item 3 from file: 350)
DIALOG(R)File 350:Derwent WPIX

012241459 **Image available**
WPI Acc No: 1999-047566/199905
XRPX Acc No: N99-034814
Seeded gel culture media preservation for vegetables or flowers - has seed **either** coated **with** water **based** gel **or** seed **implanted inside** water **based body of** gel **where combined seed and gel composite are then dried after seed** germination
Patent Assignee: AGRITECNO YAZAKI CO LTD (AGRI-N); AGRITECHNO YAZAKI KK (AGRI-N)
Inventor: INOSE K; **KOHNO Y** ; MAEJIMA T; NISHIYAMA Y
Number of Countries: 025 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 887004	A2	19981230	EP 97118737	A	19971028	199905	B
JP 11009015	A	19990119	JP 97171641	A	19970627	199913	
JP 11009016	A	19990119	JP 97171640	A	19970627	199913	
US 6112457	A	20000905	US 97965571	A	19971106	200044	

Priority Applications (No Type Date): JP 97171641 A 19970627; JP 97171640 A 19970627
Cited Patents: No-SR.Pub
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 887004	A2	E	18	A01C-001/06	
Designated States (Regional): AL AT BE CH DE DK ES FI FR GB GR IE IT LI LT LU LV MC NL PT RO SE SI					
JP 11009015	A		8	A01C-001/04	
JP 11009016	A		7	A01C-001/06	
US 6112457	A			A01C-001/06	

Abstract (Basic): EP 887004 A

The process used to preserve a seed within a gel for **germination** at a later time comprises **coating** the **seed** with **water** based **gel** (7) and drying the **gel coated seed** (S). The **water** based **gel**, used to **coat** the **seed**, has when dried a moisture content between 30% and 95%, preferably between 50% and (90%). As an alternative to applying a **coating** the **seed** can be inserted into a vertical hole formed in a body formed from gel culture medium and the composite seed and gel body can be dried after **germination**.

When required for **sowing**, the increased size of the **coated seed**, or **seed** implanted into a gel body, makes it suitable for either manual or machine **sowing** and is particularly suitable for small seeds. Nutrients and/or insecticides and other beneficial elements may be included in the gel and the seed is encouraged to **germinate** by drawing oxygen from the **gel** or the application of additional **water** prior to **sowing**.

ADVANTAGE - application of a gel provides protection against blight, attack by animals and other creatures. The increased size of gel coated is easier to **sow** either manually or by machine, improved rate of **germination** and successful cropping.

Dwg.2/3

Title Terms: SEED; GEL; CULTURE; MEDIUM; PRESERVE; VEGETABLE; FLOWER; SEED; COATING; WATER; BASED; GEL; SEED; IMPLANT; WATER; BASED; BODY; GEL; COMBINATION; SEED; GEL; COMPOSITE; DRY; AFTER; SEED; **GERMINATE**
Derwent Class: P11
International Patent Class (Main): A01C-001/04; A01C-001/06
International Patent Class (Additional): A01C-001/00; A01G-001/00; A01G-009/10
File Segment: EngPI

29/5/4 (Item 4 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011132887
WPI Acc No: 1997-110811/199711
XRAM Acc No: C97-035388
XRPX Acc No: N97-091712

Storing seeds **having** gel coat **comprising aq.** gel water **-insolubilised by metal ion - using aq. soln. contg. the metal ion, without causing redn. in yield and handling properties**

Patent Assignee: YAZAKI CORP (YAZA); SANSHO KK (SANP); YAZAKI SOGYO KK (YAZA)
Inventor: **KOHNO Y** ; MINAMI M; MINAMIGUCHI R
Number of Countries: 007 Number of Patents: 007
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
EP 753244	A1	19970115	EP 96111303	A	19960712	199711	B
JP 9023709	A	19970128	JP 95178411	A	19950714	199714	
US 5701700	A	19971230	US 96679263	A	19960712	199807	

KR 97005035	A	19970219	KR 9628285	A	19960713	199809
EP 753244	B1	19990113	EP 96111303	A	19960712	199907
DE 69601329	E	19990225	DE 601329	A	19960712	199914
			EP 96111303	A	19960712	
KR 199706	B1	19990615	KR 9628285	A	19960713	200060

Priority Applications (No Type Date): JP 95178411 A 19950714
Cited Patents: 2.Jnl.Ref; JP 5056707; JP 63317011; US 4808430; US 5334229; WO 8701258
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
EP 753244	A1	E	6	A01C-001/06	
Designated States (Regional): DE FR GB NL					
JP 9023709	A		5	A01C-001/06	
US 5701700	A		3	A01C-001/06	
KR 97005035	A			A01C-001/06	
EP 753244	B1	E		A01C-001/06	
Designated States (Regional): DE FR GB NL					
DE 69601329	E			A01C-001/06	Based on patent EP 753244
KR 199706	B1			A01C-001/06	

Abstract (Basic): EP 753244 A

A method for storing **seeds** having a gel **coat** comprising an aq. **gel** which has been **water** -insolubilised by a metal ion, comprises storing the gel- **coated** **seeds** in an aq. soln. contg. the metal ion.

Pref. the aq. soln. has an osmotic pressure that gives substantially no influence on compressive breaking strength of the gel coat.

Pref. the gel- **coated** **seeds** are stored at 0-10 deg. C.

The aq. gel pref. comprises sodium alginate or sodium polyacrylate. The concn. of the metal ion is pref. 0.001-0.6 wt.%. The metal ion is pref. selected from a calcium ion, a barium ion or an aluminium ion.

Pref. the aq. soln. further contains polyethylene glycol, sodium chloride, potassium nitrate or ammonium sulphate.

USE - The method is useful for storing seeds without causing reductions in yield and handling properties.

ADVANTAGE - The gel- **coated** **seeds** can be stored while preventing evaporation loss of **water** from the **gel** coat, thus maintaining a **water** content necessary for **germination** . The method requires no expensive chemicals such as water-absorbing polymers and is very economical. The stored seeds exhibit an equal rate of **germination** and rate of sticking out to those of the gel- **coated** **seeds** immediately after prepn.

Dwg.0/0

Title Terms: STORAGE; SEED; GEL; COAT; COMPRISE; AQUEOUS; GEL; WATER; INSOLUBLE; METAL; ION; AQUEOUS; SOLUTION; CONTAIN; METAL; ION; CAUSE; REDUCE; YIELD; HANDLE; PROPERTIES
Derwent Class: A97; C07; P11
International Patent Class (Main): A01C-001/06
International Patent Class (Additional): A01B-079/00; A01C-001/00; A01C-021/00
File Segment: CPI; EngPI

29/5/5 (Item 5 from file: 350)
DIALOG(R)File 350:Derwent WPIX

011111739
WPI Acc No: 1997-089664/199709
XRAM Acc No: C97-029249
XRPX Acc No: N97-073750
Restoration of dried capsules of aq. organic gel hardened by metal ion -

by immersion of capsule in aq. soln. contg. the same metal ion
Patent Assignee: YAZAKI CORP (YAZA); SANSHO KK (SANP)
Inventor: IDO Y; **KOHNO Y** ; MINAMI M; MINAMIGUCHI R
Number of Countries: 003 Number of Patents: 004
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
FR 2735385	A1	19961220	FR 967417	A	19960614	199709	B
JP 9000912	A	19970107	JP 95148671	A	19950615	199711	
US 5910281	A	19990608	US 96662083	A	19960612	199930	N
JP 3265918	B2	20020318	JP 95148671	A	19950615	200222	

Priority Applications (No Type Date): JP 95148671 A 19950615; US 96662083 A 19960612
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2735385	A1		11	B01J-013/20	
JP 9000912	A		5	B01J-013/00	
US 5910281	A			B29C-044/02	
JP 3265918	B2		5	A01C-001/06	Previous Publ. patent JP 9000912

Abstract (Basic): FR 2735385 A

Capsules of **aqueous** organic **gel** , hardened by metal ions and then completely solidified by drying, are restored to their original condition by immersion in an **aqueous solution** containing ions of the same metal that was originally used in the hardening process.

USE - The capsules are used to **coat seeds** , to make them easier to **sow** mechanically, and to improve their **germination** and growth. Drying of the **coated seeds** is carried out to prevent premature **germination** .

ADVANTAGE - By restoring the gel to its original form in the manner described, the physical properties are largely retained. Those restored using water alone often become mechanically weak, peel from the seed, and become opaque so that the seed cannot be inspected.

Dwg.0/0

Title Terms: RESTORATION; DRY; CAPSULE; AQUEOUS; ORGANIC; GEL; HARDEN; METAL; ION; IMMERSE; CAPSULE; AQUEOUS; SOLUTION; CONTAIN; METAL; ION
Derwent Class: A14; A97; C04; C07; J04; P11
International Patent Class (Main): B01J-013/20; B29C-044/02
International Patent Class (Additional): A01C-001/06; B01J-013/00; B01J-013/04; B29C-044/56
File Segment: CPI; EngPI

29/5/6 (Item 6 from file: 350)
DIALOG(R)File 350:Derwent WPIX

010783019 **Image available**
WPI Acc No: 1996-279972/199629
XRPX Acc No: N96-235439
Device intended to collect coated seeds **emerging from gel** coating **machine - consists of inclined draining board, down which seeds roll into collecting orifice, situated at base of collecting box, behind separating wall**
Patent Assignee: YAZAKI CORP (YAZA)
Inventor: IDO Y; **KOHNO Y** ; NAKATSUKASA K
Number of Countries: 003 Number of Patents: 003
Patent Family:

Patent No	Kind	Date	Applicat No	Kind	Date	Week	
FR 2727277	A1	19960531	FR 9513957	A	19951123	199629	B
JP 8140417	A	19960604	JP 94291216	A	19941125	199632	
US 5645093	A	19970708	US 95561424	A	19951121	199733	

Priority Applications (No Type Date): JP 94291216 A 19941125
Patent Details:

Patent No	Kind	Lan	Pg	Main IPC	Filing Notes
FR 2727277	A1		29		
JP 8140417	A		10		
US 5645093	A		14		

Abstract (Basic): FR 2727277 A

The device for collecting the coated products emerging from the rinsing bath, consists of a low separation wall (76) and a bottom wall (75) of a reception box (74), which is open upwards. A collecting orifice (77) is provided on the right hand side of bottom wall, relative to the separation wall. The reception box is formed on the other side of the separation wall and has a drainage hole (78).

A series of straining holes (97) act in such a manner as to cross at right angles to the collecting orifice. A draining board (80), which covers the upper part of the collecting box, opposite to the base wall, on the same side, is inclined towards the collecting orifice, with a slope such that the **coated seeds** roll down it to the orifice.

USE/ADVANTAGE - This device is designed to collect **seeds coated** with gel products as they emerge from the rinsing bath. It is a compact and simple device, which allows complete separation of the **coated seeds** from the rinsing water.

Dwg.1/12

Title Terms: DEVICE; INTENDED; COLLECT; COATING; SEED; EMERGENCE; GEL; COATING; MACHINE; CONSIST; INCLINE; DRAIN; BOARD; DOWN; SEED; ROLL; COLLECT; ORIFICE; SITUATE; BASE; COLLECT; BOX; SEPARATE; WALL
Derwent Class: P11; P43
International Patent Class (Main): A01C-001/06; B08B-003/04
International Patent Class (Additional): B08B-013/00

```
File   9:Business & Industry(R) Jul/1994-2002/Jun 04
         (c) 2002 Resp. DB Svcs.
File  16:Gale Group PROMT(R) 1990-2002/Jun 04
         (c) 2002 The Gale Group
File  18:Gale Group F&S Index(R) 1988-2002/Jun 04
         (c) 2002 The Gale Group
File  20:Dialog Global Reporter 1997-2002/Jun 05
         (c) 2002 The Dialog Corp.
File 148:Gale Group Trade & Industry DB 1976-2002/Jun 05
         (c)2002 The Gale Group
File 160:Gale Group PROMT(R) 1972-1989
         (c) 1999 The Gale Group
File 285:BioBusiness(R) 1985-1998/Aug W1
         (c) 1998 BIOSIS
File 481:DELPHES Eur Bus 95-2002/May W3
         (c) 2002 ACFCI & Chambre CommInd Paris
File 583:Gale Group Globalbase(TM) 1986-2002/Jun 05
         (c) 2002 The Gale Group
File 621:Gale Group New Prod.Annou.(R) 1985-2002/Jun 04
         (c) 2002 The Gale Group
File 635:Business Dateline(R) 1985-2002/Jun 05
         (c) 2002 ProQuest Info&Learning
File 636:Gale Group Newsletter DB(TM) 1987-2002/Jun 04
         (c) 2002 The Gale Group

Set     Items   Description
S1       4080   (SEED OR SEEDS)(5N)(COAT OR COATS OR COATING OR COATED OR -
             COVER? OR OVERLAY? OR LAMIN? OR FILM? OR ENVELOP? OR TOPCOAT?
             OR OVERCOAT? OR MULTICOAT? OR ENCAS? OR ENCAPSULAT?)
S2    1079105   (REFRIG? OR COOL??? OR CHILL? OR FRIDGE? OR ICE()BOX) OR (-
             (LOWER OR LOW OR REDUCE? OR REDUCING OR REDUCT?)(5N)TEMPERATU-
             RE?)
S3     107743   GERMINAT? OR (PLANT?(3N)GROW?)
S4    5818654   MINIMIZ? OR PREVENT? OR PROHIBIT? OR INHIBIT? OR STOP? OR -
             AVOID? OR ESCAP?
S5     255918   DEFECT?
S6      57860   SOW OR SOWING OR PLANT?(3N)(SEED OR SEEDS)
S7      34189   (AQUEOUS? OR AQUA OR WATER)(5N)(GEL OR SOLUTION? OR LAYER?)
S8        615   (COAT? OR ENCAPSULAT?)(3N)SEEDS
S9         34   S1(5N)S2
S10         6   S9(S)S3
S11         6   RD (unique items)
S12         0   S9 AND S7
S13         0   S1 AND S2 AND S3 AND S4 AND S5
S14         0   S9 AND S5
S15        11   S9 AND S4
S16        11   RD (unique items)
S17         8   S16 NOT S11
S18        19   S1 AND S2 AND S7
S19         5   S18 AND (S3 OR S6)
S20         4   RD (unique items)
S21         4   S20 NOT (S11 OR S16)
S22      6847   S4(3N)S5
S23         0   S8 AND S22
S24         0   S22(3N)S3
S25         0   S22(10N)S3
S26         3   S2(5N)S8
S27         3   RD (unique items)
S28         1   S27 NOT (S11 OR S16 OR S20)
```

11/3,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

08127188 Supplier Number: 67832184 (USE FORMAT 7 FOR FULLTEXT)
MORE THAN A COVER-UP.
Crabb, Charlene; D'Aquino, Rita; Kamiya, Takeshi
Chemical Engineering, v107, n12, p41
Nov, 2000
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Refereed; Trade
Word Count: 1833

... farmers to plant hybrid corn seeds up to 21 days earlier than usual, without risking **chill** damage.
Similarly, **coated** soybean **seeds** are being tested in relay cropping with winter wheat, says Tony Vyn, associate professor of...

...growing winter wheat in May, about two months before the wheat harvest. The coating delays **germination** of the soybeans for 10-25 days, so that when the wheat is ready for...

11/3,K/2 (Item 1 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter

20848016 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Snapdragons stir early memories
WESTERN MORNING NEWS
January 19, 2002
JOURNAL CODE: FWMN LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 354

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... in a fine-rosed watering can, and sowed thinly as soon as the soil had **cooled** . The **seed** , after another light watering, was **covered** only with glass, which was wiped dry daily, and newspaper, both being removed when **germination** had taken place. At a temperature of 55-60F (12.8-15.6C) this was...

11/3,K/3 (Item 2 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter

18289957 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Snippets : Practical ideas for summer gardening
Rory Dusoir
DAILY TELEGRAPH
August 11, 2001
JOURNAL CODE: FDTL LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 404

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... flowering June-July) or annual cornflowers, and the resultant plants should be kept on the **cool** side.
Sow **seeds** and **cover** them with their own depth of soil before watering with a very fine rose. Very...

...even humidity and temperature - but the cardboard must be removed at the

slightest sign of **germination** , and this needs to be checked daily. August's natural heat will be sufficient for most seeds to **germinate** . September sowings will benefit from the protection of a cold frame.

11/3,K/4 (Item 3 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter

09158726 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Gardening: Protect Plants From The Double Whammy Of Cold And Wet: Roger Clarke Advises On Winter Gardening Maintenance.
Roger Clarke
BIRMINGHAM POST, p64
January 15, 2000
JOURNAL CODE: FBMP LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 1007

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... nicking the seed coat with a sharp knife to allow moisture in to speed up **germination** .
It also usually involves the use of at least one Elastoplast, so, to protect your...

11/3,K/5 (Item 1 from file: 285)
DIALOG(R)File 285:BioBusiness(R)

00335483
Emergence of cabbage seedlings under temperature stress using gels and soil amendments.
Perkins-Veazie P M; Cantliffe D J; White J
UNITED STATES DEP. AGRIC., AGRIC. RES. SERV., LANE, OKLA. 74555, USA.
Scientia Horticulturae (Amsterdam) Vol.45, No.3-4, p.183-190, 1991.

ABSTRACT: Seedling emergence from **germinated** cultivar 'Rio Verde' cabbage (Brassica oleracea L. var. capitata) seeds was not suppressed when sown...

...of seed covers and seed treatments on seedling emergence under conditions favoring soil crusting, non- **germinated** and pre- **germinated** cabbage seeds were planted into flats of field soil. Seedling emergence of **germinated** seeds sown with water was not impeded by the field soil cover at 15.degree. C, but was reduced at 35.degree. C. Emergence from non-**germinated** seeds was less than that from **germinated** seeds sown in field soil at both 15 and 35.degree. C, but was improved when calcined clay (GrowSorb) or Plug-mix were found as **seed covers** . Use of Laponite as a **seed** carrier with **germinated** seeds **reduced** emergence at either **temperature** when sown in field soil, regardless of seed cover. Mean days to emergence were reduced...

11/3,K/6 (Item 2 from file: 285)
DIALOG(R)File 285:BioBusiness(R)

00036452
STUDIES ON THE CULTIVATION OF SENNA (CASSIA ANGUSTIFOLIA): 1. THE GERMINATION OF SEED, GROWTH, FLOWERING AND PODDING.
Shirai H; Kagei K
KAWASHIMA RES. LAB., EISAI CO. LTD., GIFU 483, JPN.

Shoyakugaku Zasshi Vol.39, No.2, p.111-117, 1985.

...ABSTRACT: years. The results obtained were as follows: 1. Only 17% on average of untreated seeds **germinated** , owing either to their hard **seed coat** or to a relatively **low temperature** in the greenhouse. Therefore, **seed coat** was slightly cut off with scissors. A high **germination** rate of more than 89% was then achieved. 2. The young plants in the field...

17/3,K/1 (Item 1 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2002 The Dialog Corp. All rts. reserv.

20897790 (USE FORMAT 7 OR 9 FOR FULLTEXT)
A taste of the Mediterranean
Michal Meyer
JERUSALEM POST
January 18, 2002
JOURNAL CODE: WJPT LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 1360

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... mins. and then return to a very low heat. Simmer rice for 20 mins. and **avoid** the temptation to remove the lid to check on the rice. Remove pot from heat...

... top. Cook in oven for 20 mins. Best served hot. Reheats well but cover to **prevent** drying out.
Serves 4 to 6.
ROASTED TOMATOES
It's important not to use overly...

...Pour the marinade over the chops and leave to sit for at least 2 hours, **covered** , in the **fridge** .
Heat grape- **seed** oil in a heavy, oven-proof skillet, on a high heat. Once the oil is...

17/3,K/2 (Item 2 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2002 The Dialog Corp. All rts. reserv.

17636417 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Things to do in your garden this week
Rebecca Dunbar
DAILY TELEGRAPH
July 07, 2001
JOURNAL CODE: FDTL LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 292

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... plant
in groups of three, five, seven
or nine for an attractive but unregimented clump.
Prevent the spread of fungal attack by removing mouldy or dying leaves immediately.
Check the wellbeing...

...seed from lupins and foxgloves once they have finished flowering. If you want to store **seeds** , keep them in **envelopes** in the **fridge** .
Take cuttings of viburnum, hydrangea, and ceanothus now. Plunder half-ripened shoots of this year...

17/3,K/3 (Item 3 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter
(c) 2002 The Dialog Corp. All rts. reserv.

13099774 (USE FORMAT 7 OR 9 FOR FULLTEXT)
Scary move

DAMON WISE
SCOTSMAN, p8
September 30, 2000
JOURNAL CODE: FSCT LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 2320

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... a thriller at all. But she's positive about one thing: it was creepy.
The **film** was The Bad **Seed** , a lurid 1956 **chiller** about a little girl named Rhoda, played by Patty McCormack, who covets the school penmanship...
... but beautiful) ghetto teachers. But she's very democratic when asked if her looks have **stopped** her being offered certain roles.
"I think, as actors, we're all limited in some...

17/3,K/4 (Item 1 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

11592440 SUPPLIER NUMBER: 56014024 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Improve operations and enhance refinery sulfur recovery.
Bourdon, J.C.
Hydrocarbon Processing, 76, 4, 57(6)
April, 1997
ISSN: 0018-8190 LANGUAGE: English RECORD TYPE: Fulltext
WORD COUNT: 4512 LINE COUNT: 00387

... developments. Process and design philosophies are safer by: using hydrogen induced cracking (HIC) plate to **avoid** this problem in wet (H.sub.2)S service, incorporating "lethal design" techniques, increasing equipment...

...NFPA supervised manual burner management systems, improving instrumentation and controls, and incorporating modular designs that **minimize** construction within operating units.
These advancements result in sulfur recovery units that are safer, more...especially for a premium product. Dust produces a highly dangerous explosion hazard and should be **avoided** . Particles larger than dust are often carried away by wind. Friability is a measure of...
...maintenance.
Granulation is the progressive solidification of sulfur granules. Several layers of sulfur are typically **coated** on a " **seed** " granule. **Cooling** is provided by water or air. Examples of this technology are the Procor GX Granulation...

17/3,K/5 (Item 2 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB

07931646 SUPPLIER NUMBER: 17008545 (USE FORMAT 7 OR 9 FOR FULL TEXT)
A winning performance: stellar chefs share signature dairy recipes in all menu categories.(recipes)
Ryan, Nancy Ross
Restaurants & Institutions, v105, n14, p120(6)
June 1, 1995
ISSN: 0273-5520 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 3263 LINE COUNT: 00287

... thick, sieve into stainless-steel bowl. Set bowl into larger bowl

with iced water to **stop** cooking; refrigerate overnight. To serve, remove vanilla bean from custard. Fill bottom of sweet taco...until sugar dissolves, about 5 minutes. Strain mixture, pressing seeds with spoon against mesh. Discard **seeds** . Add prunes to syrup mixture. **Cover** ; **refrigerate** until cold.

Meringue sticks

Yield: 48 sticks

Egg whites, room temperature 3

Sugar 1/3...

17/3,K/6 (Item 3 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

06503609 SUPPLIER NUMBER: 14176051 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Poultry in a new light. (chicken, turkey, duck and quail as health food) (includes recipe)
Weiss, Steve
Restaurants & Institutions, v103, n10, p80(4)
April 15, 1993
ISSN: 0273-5520 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT; ABSTRACT
WORD COUNT: 1332 LINE COUNT: 00123

... the grill markings look better."

Jack also suggests cutting any sinew on the breast to **prevent** curling while cooking. In addition, he advises pounding the breast to flatten it a little...

...Sunflower seeds, roasted 1 cup

Method: Blend yogurt, mayonnaise, sugar, vinegar, salt, pepper and celery **seed** ; **refrigerate** , **covered** , until needed. In large bowl, combine cooked chicken, broccoli, grapes, onion and sunflower **seeds** . Mix in dressing; **refrigerate** , **covered** , until needed. Serve on individual lettuce leaves or as desired.

Marinades build flavor in chicken...

17/3,K/7 (Item 4 from file: 148)
DIALOG(R)File 148:Gale Group Trade & Industry DB
(c)2002 The Gale Group. All rts. reserv.

04856460 SUPPLIER NUMBER: 09075268 (USE FORMAT 7 OR 9 FOR FULL TEXT)
Sweet techniques. (restaurant menu ideas; includes recipes)
Restaurants & Institutions, v100, n29, p130(5)
Nov 14, 1990
ISSN: 0273-5520 LANGUAGE: ENGLISH RECORD TYPE: FULLTEXT
WORD COUNT: 1509 LINE COUNT: 00128

... until it just starts to thicken. Remove from heat immediately. Pour into clean container to **prevent** further cooking. Refrigerate. Serve cold or at room temperature.

COOL JALAPENO SURPRISE

Yield: 16 servings...

...syrup 1 cup

Method: Choose bright, firm, ripe raspberries. Run berries through food mill; discard **seeds** . Mix in syrup. **Cover** ; **refrigerate** . Use as needed.

SOUFFLE PREPARATION TIPS

There are three methods for baking souffles: in a...at very low heat, 250F, for 45 minutes to 1 hour. * Use parchment paper to **prevent** rounds from sticking to the baking sheet. * Rounds might soften in a humid

atmosphere, but...

17/3,K/8 (Item 1 from file: 285)
DIALOG(R)File 285:BioBusiness(R)

00104315
EFFECT OF SEED MOISTURE CONTENT AND TEMPERATURE ON THE SEED COAT DURABILITY OF FIELD PEA.
Ehiwe A O F; Reichert R D; Schwab D J; Humbert E S; Mazza G
PLANT BIOTECHNOL. INST., NATL. RES. COUNCIL CAN., 110 GYMNASIUM RD., SASKATOON, SASKATCHEWAN S7N 0W9.
Cereal Chemistry Vol.64, No.4, p.237-239, 1987.

...ABSTRACT: seed coat breakage increased with decreases in seed temperature, particularly at -40.degree. C. To **avoid** excessive seed coat breakage, it is recommended that peas not be handled at moisture contents ...

...be handled with care at temperatures between -10 and -25.degree. C. The effect of **low temperature** (-40.degree. C) on **seed coat** durability was completely reversible.

21/3,K/1 (Item 1 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

08140506 Supplier Number: 67936028 (USE FORMAT 7 FOR FULLTEXT)
MANUFACTURERS.
Health Products Business, v46, n11, p16
Nov, 2000
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Trade
Word Count: 72095

... Dir. Dist. Sales. Manufactures: Freeze-dried/dehydrated meat entrees and side dishes, all natural no **refrigeration** .

ALPURSA - PO Box 25846, Salt Lake City, UT 84125, Phone: 801/965-8428, Fax: 801...847/433-3279, E-mail: aquabelle@hotmail.com. Dov Kahana, Pres.; Ben Israel, VP. Manufactures: **Water** filters - countertop, undersink, shower filter, ...Fax: 253/265-8095. Kimberly Bowman. Manufactures: Vanillas: pure vanilla & assorted powders, non-alcoholic vanillas.

COOL FRUITS INC. - 1497 Rail Head Blvd., Unit 2, Naples, FL 34110, Phone: 941/591-4646, Fax: 941/591-4327. Kristi Siplon.

COOL NATURAL BEVERAGE - 1616 Gateway Blvd., Richardson, TX 75080, Phone: 214/235-8844, Fax: 214/235...Manufactures: Biodegradable cleaning products for the removal of hard water deposits. Brands: Sea Spots Gone, **Cooler** Descale-It, Scale Solve, Institutional Descale-It, Descalelt Bathroom Cleaner, Descale-It Toilet Bowl Cleaner...com/personal/IN. Shari Frederick, Pres. Manufactures: Plant enzymes in combination with vitamins, minerals, herbs, **growers** of **plant** enzymes, formulations, private label.

EQUILIBRIUM LABORATORIES - 349 NE 19th Ave., Deerfield Beach, FL 33441, Toll...Phone: 718/497-0170, Fax: 718/366.8504. Milton Radutsky, Pres. Manufactures: Tahini, kosher foods, **seeds** , halvab, sesame crunch, chocolate- **covered** marshmallows and agaragar jellies. Brands: Joyva.

JUICE MART INC. - 605 W. Huntington Dr., #201, Monrovia...Jadon Frost, VP. Manufactures: Oral care products and oxygen-based supplements. Brands: OxyLife, SecondWind 02, **Cool** Sense, Zero2 Sixty, Orachel.

OZARK MOUNTAIN TRADING CO. - PO Box 171, Westfield, NJ 07090, Phone ...

...formulas. Specializing in medicinal, general health and related fields. Brands: Adaptrin, Resist, ArteClear @ZIT.GONE, **ChillOut** , Cognicine, Feminestra, Hepato-C, Orthoflex, Naturafed.

PACIFIC FOODS OF OREGON INC. - 19480 SW 97th Ave...site: www.seedsofchange.com. Howard Shapiro, VP Purch. Manufactures: Organically grown vegetable, flower and herb **seeds** , books, tools, **cover** crops, free catalogue. Brands: Organic Foods, Organic Seeds.

SEELECT HERB TEA CO. - 743 Flynn Rd...PO Box 33131, Austin, TX 78764, Phone: 512/326-3304. Lauri Raymond, Pres. Manufactures: Fresh **chilled** salad dressings, pasta sauces, marinades. Brands: SASS.

SKW CHEMICALS INC. - 1509 Johnson Ferry Rd., Ste...Fax: 603/437-7594. Bob Burke. VP Mktg./Sales; Gary Hirshberg, Pres. Manufactures: All natural **refrigerated** , hard pack, frozen & soft-serve frozen yogurt, low fat ice cream.

STOPAIN/DRJ GROUP INC...

21/3,K/2 (Item 2 from file: 16)
DIALOG(R)File 16:Gale Group PROMT(R)

07043904 Supplier Number: 57643912 (USE FORMAT 7 FOR FULLTEXT)
Winterfat Seeds Take Ice Stakes Through the Heart.
Comis, Don

Agricultural Research, v47, n1, p24
Jan, 1999
Language: English Record Type: Fulltext
Document Type: Magazine/Journal; Academic
Word Count: 587

(USE FORMAT 7 FOR FULLTEXT)
TEXT:
...have shown that sopping wet winterfat seeds from Wyoming, Colorado, and Saskatchewan, Canada, can survive **temperatures** at least as **low** as -22 (degrees) F.
... British Columbia, and Jim Romo, with the University of Saskatchewan, found that water absorption before **germination** is greatest for seeds soaked at 40"F or lower. Most seeds have a greater...

...by where the seeds were collected, indicating that the plants have evolved so that the **germination** requirements of the seeds fit local climate variations. "So it's generally best to **plant** **seed** collected locally," Booth says.
Under magnification, Booth saw ice crystals in the embryos of seeds ...

...because of his suspicion that winterfat may fight ice with ice. The hairy layers that **cover** winterfat **seeds** appear likely to promote ice crystal formation. If ice crystals form first in the outer **layers** , these crystals may suck **water** from the embryo, aiding a freeze-dehydration process that limits damage caused by embryo ice...

21/3,K/3 (Item 1 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter

20368187 (USE FORMAT 7 OR 9 FOR FULLTEXT)
The Weekend Gardener
A temperamental Christmas classic
John Grayden:featureseditor@belfasttelegraph.co.uk
BELFAST TELEGRAPH
December 15, 2001
JOURNAL CODE: WBEL LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 838

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... buying poinsettias, choose plants with healthy bracts and good colour.
- Keep cacti dry in a **cool** , light position during the winter months.
- **Sow** celery in a heated greenhouse to ensure protection from damaging frosts.
- Divide well-established clumps...

...plant fruit trees and bushes if the ground is not frozen or waterlogged.
TIP
When **sowing** alpines, **cover** the **seeds** with a **layer** of fine grit to allow **water** to drain away from the crown of young plants, which are prone to rotting in...

21/3,K/4 (Item 2 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter

13410806 (USE FORMAT 7 OR 9 FOR FULLTEXT)

The productive garden: Sarah Raven continues her series on how to make your garden work for you. This week: pumpkins and squashes

Sarah Raven
DAILY TELEGRAPH, p18
October 21, 2000
JOURNAL CODE: FDTL LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 1204

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... pick the squashes young.

For large fruit, leave only two or three fruit on the **plant** and let them **grow** as long as possible.

If you're going for the big ones, lay the ripening...

... them as long a growing season as possible before the autumn frosts kill the plants.

Sow under cover in late April/early May, three weeks before the last possible frost in...

...resulting in rapid early growth. Seedlings will be ready to plant out in three weeks.

Sow two seeds to a 3in pot, 1/2 in deep, placing them on their sides. If you **sow** them flat, they may rot.

Once the plants have three or four pairs of leaves...

...to exclude the light and put them in a warm place. They like heat to **germinate** (68F/20C).

The moment you see any sign of life, usually within seven to 10...

... three pairs of leaves, plant them out - but not before the beginning of June. Prolonged **low** , non-freezing **temperatures** will damage seedlings. If necessary, pot them on.

Squashes like a rich, deeply dug soil...

... the same distance between rows. For trailers, space 4ft apart with 6ft between rows.

Direct **sowing**

If you live in the south of England, you can also **sow** squash direct into the ground outside, but wait until early June.

The key thing with direct **sowing** is warm soil. These plants will not **germinate** if the soil is below 13C/55F and they prefer it much warmer.

Dig out...

... fill with well-rotted manure and cover with a cloche for a week before you **sow** . This will warm it up more quickly.

Follow the rules of spacing given above.

Make a mound above the manure and **sow** two seeds 1in deep in the centre of the mound.

Cover the sown **seeds** with a cloche or horticultural fleece. Wait for the seedlings to appear and remove the...

...week, but the roots are not deep, so frequent watering sufficient to wet the top **layer** of soil is best. **Water** in the morning - night-time humidity can encourage disease.

Which varieties?

Bush varieties take up...

28/3,K/1 (Item 1 from file: 20)
DIALOG(R)File 20:Dialog Global Reporter

14323090 (USE FORMAT 7 OR 9 FOR FULLTEXT)
When Seared Kangaroo Just Isn't Enough: FOOD & DRINK
FAY MASCHLER
EVENING STANDARD, p24
December 19, 2000
JOURNAL CODE: FES LANGUAGE: English RECORD TYPE: FULLTEXT
WORD COUNT: 1942

(USE FORMAT 7 OR 9 FOR FULLTEXT)

... pancakes) and the evolved idea of supreme of chicken with sesame in which lime, honey, **chilli** and the roasted **seeds** **coat** the meat; lunch with a dear woman friend at THE LINDSAY HOUSE, where we tucked...
?

```
File   5:Biosis Previews(R) 1969-2002/May W4
         (c) 2002 BIOSIS
File   6:NTIS 1964-2002/Jun W3
         (c) 2002 NTIS, Intl Cpyrght All Rights Res
File  10:AGRICOLA 70-2002/May
         (c) format only 2002 The Dialog Corporation
File  28:Oceanic Abst. 1964-2002/May
         (c) 2002 Cambridge Scientific Abstracts
File  34:SciSearch(R) Cited Ref Sci 1990-2002/Jun W1
         (c) 2002 Inst for Sci Info
File  44:Aquatic Sci&Fish Abs 1978-2002/May
         (c) 2002 FAO (for ASFA Adv Brd)
File  50:CAB Abstracts 1972-2002/Apr
         (c) 2002 CAB International
File  65:Inside Conferences 1993-2002/May W4
         (c) 2002 BLDSC all rts. reserv.
File  76:Life Sciences Collection 1982-2002/May
         (c) 2002 Cambridge Sci Abs
File  94:JICST-EPlus 1985-2002/Apr W2
         (c)2002 Japan Science and Tech Corp(JST)
File  98:General Sci Abs/Full-Text 1984-2002/Apr
         (c) 2002 The HW Wilson Co.
File  99:Wilson Appl. Sci & Tech Abs 1983-2002/Apr
         (c) 2002 The HW Wilson Co.
File 117:Water Resour.Abs. 1967-2002/Apr
         (c) 2002 Cambridge Scientific Abs.
File 143:Biol. & Agric. Index 1983-2002/Apr
         (c) 2002 The HW Wilson Co
File 144:Pascal 1973-2002/Jun W1
         (c) 2002 INIST/CNRS
File 203:AGRIS 1974-2002/Mar
         Dist by NAL, Intl Copr. All rights reserved
File 235:AGROProjects 1990-2002/Q3
         (c) 2002 PJB Publications,Ltd.
File 266:FEDRIP 2002/Apr
         Comp & dist by NTIS, Intl Copyright All Rights Res
File 306:Pesticide Fact File 1998/Jun
         (c) 1998 BCPC
File 357:Derwent Biotech Res. _1982-2002/Mar W3
         (c) 2002 Thomson Derwent & ISI
File 434:SciSearch(R) Cited Ref Sci 1974-1989/Dec
         (c) 1998 Inst for Sci Info

Set     Items   Description
S1      23709   (SEED OR SEEDS)(5N)(COAT OR COATS OR COATING OR COATED OR -
             COVER? OR OVERLAY? OR LAMIN? OR FILM? OR ENVELOP? OR TOPCOAT?
             OR OVERCOAT? OR MULTICOAT? OR ENCAS? OR ENCAPSULAT?)
S2    1073922   (REFRIG? OR COOL??? OR CHILL? OR FRIDGE? OR ICE()BOX) OR (-
             (LOWER OR LOW OR REDUCE? OR REDUCING OR REDUCT?)(5N)TEMPERATU-
             RE?)
S3     698281   GERMINAT? OR (PLANT?(3N)GROW?)
S4    5260539   MINIMIZ? OR PREVENT? OR PROHIBIT? OR INHIBIT? OR STOP? OR -
             AVOID? OR ESCAP?
S5     757358   DEFECT?
S6     233122   SOW OR SOWING OR PLANT?(3N)(SEED OR SEEDS)
S7     410198   (AQUEOUS? OR AQUA OR WATER)(5N)(GEL OR SOLUTION? OR LAYER?)
S8       3125   (COAT? OR ENCAPSULAT?)(3N)SEEDS
S9        659   S1 AND S2 AND S3
S10         2   S9 AND S4 AND S5
S11         2   RD (unique items)
S12        17   S9 AND S7
S13         8   S12 AND S6
S14         8   RD (unique items)
```

S15	8	S14 NOT S11
S16	120	S1(5N)S2
S17	10072	S4(5N)S5
S18	0	S16 AND S17
S19	471	S4()S5
S20	0	S16 AND S19
S21	0	S16 AND S4 AND S5
S22	57	S16 AND S3
S23	15	S22 AND S8
S24	13	RD (unique items)
S25	13	S24 NOT (S11 OR S14)
S26	5	AU='KOHNO YASUSHI'
S27	245	AU='KOHNO, Y' OR AU='KOHNO, Y.' OR AU='KOHNO, YASUSHI'
S28	58	AU='KATSUTANI N' OR AU='KATSUTANI NORITOSHI'
S29	10	AU='KATSUTANI, N.'
S30	24	(S26 OR S27 OR S28 OR S29) AND (S1 OR S3 OR S6 OR S8)
S31	1	S30 AND S7
S32	1	S31 NOT (S11 OR S14 OR S24)
S33	1	S30 AND S1
S34	0	S33 NOT (S11 OR S14 OR S24 OR S31)
S35	19	S30 AND S3
S36	8	S35 AND S2
S37	8	S36 NOT (S11 OR S14 OR S24 OR S31)

11/3,AB/1 (Item 1 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text

04268139 H.W. WILSON RECORD NUMBER: BGSA00018139
Clarification of the carpel number in Papaverales, Capparales, and Berberidaceae.
Bruckner, Claudia
The Botanical Review (Bot Rev) v. 66 no2 (Apr./June 2000) p. 155-307
SPECIAL FEATURES: bibl il ISSN: 0006-8101
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
WORD COUNT: 74344

ABSTRACT: For more than 170 years there has been a controversy about the organization of the siliqua, a fruit typical for the Brassicaceae and, in modified forms, also for members of Capparaceae, Papaveraceae, and Fumariaceae. Because in the Berberidaceae fruit forms resembling a "semi-siliqua" are produced, they are also controversial. A siliqua is typically furnished with two placental regions joined by a septum and dehiscing through detachment of two sterile valves. Modified forms lack a septum and have only one or more than two valves, or are indehiscent. The controversial issue is the number of carpels composing a siliqua, typical or modified. Aside from the fact that the nature and phylogeny of the angiosperm organ "carpel" are still insufficiently known and therefore speculative, carpel numbers of two, four, and six have been proposed for a bivalvate siliqua; moreover, an "acarpellate" state as an axis-derived structure has been postulated. Within the framework of these theories there are additional theories concerning the position, shape, and fertility or sterility of what are believed to be carpels. Each of these concepts is reviewed here, and its morphological basis is checked. Gynoecial features used as evidence of the manifold hypotheses are shape of the stigma, zones of dehiscence, structure of the placental regions, vascular pattern, ontogeny, and teratological transformations. They are discussed for each family and compared in the context of the conclusions derived from them. The result is that Robert Brown's (1817) classical theory, explaining the siliqua as a product of fusion of two transverse carpels with the valves being opercular structures and the septum formed of placental outgrowths, cannot be invalidated by any of the later theories. Stigmatic lobes should not a priori be equated with carpel tips, and their number is not a definite indication of carpel number. The zones of dehiscence are not carpel borders but secondary separation tissues within the carpel blade. Massive placental regions with complex venation need not be solid carpels. Number and course of vascular bundles may be interpreted in ontogenetic and functional terms, and the concept of vascular conservatism is unsound. Gynoecial growth centers must not uncritically be equated with carpel primordia. Terata, such as tetravalvate siliquae, are not atavisms. Thus, carpel numbers higher than those of placentae in the given gynoecium cannot be ascertained. The gynoecium of Berberidaceae is truly monomerous. The identical organization of the gynoecia in the families concerned demands their explanation by a single theory. Many textbooks, floras, and monographs should be revised from this point of view. Reprinted by permission of the publisher.

11/3,AB/2 (Item 2 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text

03253285 H.W. WILSON RECORD NUMBER: BGSI96003285
The genetics of flower development: from floral induction to ovule morphogenesis.
Weigel, Detlef

Annual Review of Genetics (Annu Rev Genet) v. 29 ('95) p. 19-39
SPECIAL FEATURES: bibl il ISSN: 0066-4197
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
WORD COUNT: 9199

ABSTRACT: Recent advances in the understanding of the genetic control of floral induction and determination of flower-meristem identity are reviewed, primarily focusing on Arabidopsis thaliana. Random mutagenesis and reverse genetics techniques have identified several genes controlling the various stages of flower development. The genes involved during flowering include late- and early-flowering genes and photomorphogenetic genes, with the plant hormone gibberellin playing a crucial role. Induction and maintenance of meristem identity and floral induction are also genetically controlled. Recent research has concentrated on ovule morphogenesis, which represents a late process in flower development.

15/3,AB/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12771989 BIOSIS NO.: 200000525612
Taxonomy, anatomy and evolution of physical dormancy in seeds.
AUTHOR: Baskin Jerry M; Baskin Carol C(a); Li Xiaojie
AUTHOR ADDRESS: (a)School of Biological Sciences, University of Kentucky, Lexington, KY, 40506**USA
JOURNAL: Plant Species Biology 15 (2):p139-152 August, 2000
MEDIUM: print
ISSN: 0913-557X
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: Physical dormancy (PY) is caused by a water-impermeable **seed** or fruit **coat** . It is known, or highly suspected, to occur in nine orders and 15 families of angiosperms (sensu Angiosperm Phylogeny Group 1998), 13 of which are core eudicots. The Zingiberales is the only monocot order, and Cannaceae (Canna) the only monocot family, in which PY is known to occur. Six of the nine orders, and 12 of the 15 families, in which PY occurs are rosids. Furthermore, six of the families belong to the Malvales. The **water** -impermeable palisade **layer** (s) of cells are located in the **seed coats** of 13 of the families, and in the fruit coats of Anacardiaceae and Nelumbonaceae. In all 15 families, a specialized structure is associated with the **water** -impermeable **layer** (s). The breaking of PY involves disruption or dislodgment of these structures, which act as environmental 'signal detectors' for **germination** . Representatives of the nine angiosperm orders in which PY occurs had evolved by the late Cretaceous or early Tertiary (Paleogene). Anatomical evidence for PY in fruits of the extinct species Rhus rooseae (Anacardiaceae, middle Eocene) suggests that PY had evolved by 43 Ma, and probably much earlier. We have constructed a conceptual model for the evolution of PY, and of PY+ physiological dormancy (PD), within Anacardiaceae. The model begins in pre-Eocene times with an ancestral species that has large, pachychalazal, non-dormant (ND), recalcitrant seeds. By the middle Eocene, a derived species with relatively small, partial pachychalazal, orthodox seeds and a water-impermeable endocarp (thus PY) had evolved, and by the Oligocene, PD had been added to the seed (true seed + endocarp) dormancy mechanism. It is suggested that climatic drying (Eocene), followed by climatic **cooling** (Eocene-Oligocene transition), were the primary selective agents in the development of PY. An evolutionary connection between PY and recalcitrance is suggested by the relatively high concentration of these two character states in the rosids. Phylogenetic data and fossil evidence seem to support the PYfwdarw(PY + PD) evolutionary sequence in Anacardiaceae, which also may have occured in Leguminosae.

2000

15/3,AB/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

04244801 BIOSIS NO.: 000077070846
SEED GERMINATION **CHARACTERISTICS OF 3 WOODY PLANT SPECIES FROM SOUTH TEXAS USA**
AUTHOR: EVERITT J H
AUTHOR ADDRESS: US. DEP. AGRIC. SOIL AND WATER CONSERVATION RES., WESLACO, TEX. 78596.

JOURNAL: J RANGE MANAGE 36 (2). 1983. 246-249. 1983
FULL JOURNAL NAME: Journal of Range Management
CODEN: JRMGA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: The seed **germination** of blackbrush (Acacia rigidula), guajillo (A. berlandieri) and guayacan (Porlieria angustifolia) was investigated in relation to temperature and various regimes of light; substrate salinity, pH and osmotic potential; seed age; and site of seed source. **Germination** of blackbrush seed is restricted by an impermeable **seed coat** . Mechanical scarification or soaking **seeds** in concentrated sulfuric acid for 15-30 min increased blackbrush **germination** from 74-86%. Blackbrush, guajillo and guayacan seed **germination** was best at .apprx. 25.degree. C. Blackbrush seed **germination** was not reduced by alternating as opposed to constant temperatures but **germination** of guajillo and guayacan was generally **lower** under alternating **temperatures** . Light was not required for **germination** . No seed dormancy mechanisms were observed other than the hard **seed coat** of blackbrush and **seed** viability was not significantly reduced after 1 yr in storage at room conditions. Guajillo **seed** collected from **plants growing** on a sandy loam site had higher percent **germination** than those of **plants growing** on a more droughty clay loam site. **Germination** of blackbrush and guayacan from different sites did not differ. **Germination** and radicle length of seedlings were relatively tolerant of extremes of pH. Guajillo **germination** was significantly reduced in an **aqueous solution** of 2500 ppm NaCl. **Germination** of blackbrush seed was not affected by 10,000 ppm NaCl, but guayacan seed **germination** was reduced at this concentration. Radicle lengths of seedlings of all species were significantly reduced at 10,000 ppm NaCl. Seed **germination** and radicle length of all 3 spp. were progressively decreased by increasing moisture stress up to -12 bars. Emergence of blackbrush and guajillo seedlings was not dependent upon burial in the soil; **germination** and emergence were greatest on the soil surface or from a depth of 1 cm.

1983

15/3,AB/3 (Item 1 from file: 50)
DIALOG(R)File 50:CAB Abstracts

00385187 CAB Accession Number: 760744917
Thiourea solution temperature and bitterbrush germination **and seedling growth.**
Neal, D. L.; Sanderson, H. R.
Pacific Southwest Forest and Range Exp. Sta., Berkeley, CA 94701, USA.
Journal of Range Management vol. 28 (5): p.421-423
Publication Year: 1975
ISSN: 0022-409X --
Language: English
Document Type: Journal article
In Petri-dish experiments, **germination** at 70 deg F and seedling growth of Purshia tridentata following exposure of seeds for 5 min to temperatures in the range 60-200 deg F in a 3% thiourea **solution** or in distilled **water** with the **seed coats** removed after the water treatment did not differ significantly between treatments. Exposure to **temperatures** of 30-50 deg slightly **reduced germination** percentage and to 150, 160 or 170 deg resulted in reductions in **germination** of about 15, 49 and 99.6% and in annular cracks round hypocotyls and detached root caps. Seeds exposed to 180-200 deg did not **germinate** . All **germinated seeds planted** upright or horizontally grew normally, but some of those planted with the hypocotyl upwards would have died had they

not been turned over. 6 ref.

15/3,AB/4 (Item 1 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text

04506262 H.W. WILSON RECORD NUMBER: BGSA01006262
Spatiotemporal dynamics of Floerkea proserpinacoides (Limnanthaceae), an annual plant of the deciduous forest of eastern North America.
Houle, Gilles
McKenna, Margaret F; Lapointe, Line
American Journal of Botany (Am J Bot) v. 88 no4 (Apr. 2001) p. 594-607
SPECIAL FEATURES: bibl il ISSN: 0002-9122
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
WORD COUNT: 11427

ABSTRACT: Because environmental filters are temporally and spatially heterogeneous, there often is a lack of significant relationship between the spatial patterns of successive life stages in plant populations. In this study, we determined the spatiotemporal relationships between different life stages in two populations of an annual plant of the deciduous forests of eastern North America, Floerkea proserpinacoides. Demographic surveys were done over a 4-yr period, and experiments were performed in the field and under controlled conditions to test for the effects of various environmental factors on population dynamics. There was a general lack of relationship between the spatial patterns of seed bank and seedling density, and a lack of similarity between their spatial correlograms. This was related mostly to the effects of spatially variable environmental filters operating on **germination** and emergence. However, environmental filters acting on plant survival were stable through time and contributed to stabilize the density and spatial patterns of the populations. Despite density-dependent presenescence mortality, spatial patterns of seedlings and mature individuals were similar and their correlograms were alike, suggesting that mortality did not fully compensate for density. Estimated fecundity was negatively correlated with population density over the study period. Although flower production started only 2-3 wk after emergence, seed maturation mostly occurred at the end of the life cycle, just before the onset of plant senescence. Yet, individual fecundity was low for an annual plant, i.e., 3.0 {plus or minus} 0.5 mature **seeds / plant** (mean {plus or minus} 1 SE). Second predation by vertebrates was not significant. Low soil moisture had little effect on the total number of seeds **germinating** , although it slowed down the **germination** process. In quadrats where leaf litter was experimentally doubled, seedling emergence was lower than in control quadrats: in quadrats where leaf litter was completely removed, emergence did not differ from that in control quadrats. Susceptibility to drought stress was higher for seedlings than for mature plants. Although the species does not maintain a long-term persistent soil seed bank, other factors, such as density-dependent fecundity and autogamy, may temper population fluctuations through time and reduce the probability of local extinction. Reprinted by permission of the publisher.

15/3,AB/5 (Item 2 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text

04505192 H.W. WILSON RECORD NUMBER: BGSA01005192
Interspecific and intraspecific variation in seed size and germination **requirements of Sarracenia (Sarraceniaceae).**
Ellison, Aaron M
American Journal of Botany (Am J Bot) v. 88 no3 (Mar. 2001) p. 429-37

SPECIAL FEATURES: bibl il ISSN: 0002-9122
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
WORD COUNT: 7420

ABSTRACT: Seed size and **germination** requirements of eight (of nine) Sarracenia species, and 13 populations of S. purpurea were studied. All species except for S. purpurea are restricted to the southeastern United States, whereas S. purpurea ranges across Canada, southward along the eastern United States into Maryland and Virginia (S. purpurea ssp. purpurea), and from New Jersey southward into northern Florida and the coast of the Gulf of Mexico (S. purpurea ssp. venosa). I tested the hypotheses that dormancy-breaking requirements vary predictably among species across a latitudinal gradient. I also sought to determine whether seed size and **germination** requirements were useful characters for resolving systematic and phylogenetic questions within this genus. Seed size varied significantly among species, but variability in seed size within S. purpurea exceeded the variability in seed size observed across all eight species studied. Seeds of all species are morphophysiologically dormant upon dispersal. Length of required **cool** , moist pretreatment varied among species, and **germination** in higher latitude populations is enhanced with longer pretreatment. In contrast, variability in **germination** requirements of subspecies, varieties, and populations of the geographically wide-ranging S. purpurea was not related clearly to geographic location (latitude or elevation). **Germination** requirements do not map onto a proposed phylogeny of Sarracenia, but observed differences in **germination** requirements of S. purpurea ssp. venosa var. burkii relative to other populations of S. purpurea support the recent proposal to elevate this variety to species status. Reprinted by permission of the publisher.

15/3,AB/6 (Item 3 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text

04273628 H.W. WILSON RECORD NUMBER: BGSA00023628
Morphophysiological dormancy in seeds of two North American and one Eurasian species of Sambucus (Caprifoliaceae) with underdeveloped spatulate embryos.
Hidayati, Siti N
Baskin, Jerry M; Baskin, Carol C
American Journal of Botany (Am J Bot) v. 87 no11 (Nov. 2000) p. 1669-78
SPECIAL FEATURES: bibl graph tab ISSN: 0002-9122
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
WORD COUNT: 9103

ABSTRACT: In contrast to previous reports, the endocarps (" **seed coats** ") of Sambucus species are not impermeable to water; thus, the seeds do not have physical dormancy. Seeds of the North American species Sambucus canadensis and S. pubens and of the European species S. racemosa have spatulate shaped embryos that are {similar}60% fully developed (elongated) at seed maturity. The embryo has to extend to the full length of the seed to **germinate** . Embryos in freshly matured seeds of S. canadensis and in those of S. pubens grew better at 25{degree}/15{degree}C than at 5{degree}C, whereas the rate of embryo growth in S. racemosa was higher at 5{degree}C than at 25{degree}/15{degree}C. Seeds of all three species **germinated** to significantly higher percentages in light (14-h photoperiod) than in darkness. Fresh seeds of neither species **germinated** during 2 wk of incubation over a range of thermoperiods. Warm followed by cold stratification broke dormancy in seeds of S. canadensis and in those of S. pubens. Thus, seeds of these two North American species have deep simple

morphophysiological dormancy (MPD). In comparison, seeds of the European species S. racemosa required a cold stratification period only for dormancy break, and thus they have intermediate complex MPD. GA3 was much more effective in breaking dormancy in seeds of S. racemosa than it was in those of S. canadensis or S. pubens. Reprinted by permission of the publisher.

15/3,AB/7 (Item 4 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text

04019010 H.W. WILSON RECORD NUMBER: BGSA99019010
Seed and seedling ecology of piUnon and juniper species in the pygmy woodlands of western North America.
AUGMENTED TITLE: review
Chambers, Jeanne C
Vander Wall, Stephen B; Schupp, Eugene W
The Botanical Review (Bot Rev) v. 65 no1 (Jan./Mar. 1999) p. 1-38
SPECIAL FEATURES: bibl il ISSN: 0006-8101
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
WORD COUNT: 22486

ABSTRACT: Knowledge of the seed and seedling ecology of the piUnon and juniper woodlands of western North America is essential for understanding both the northward migration and expansion of the woodlands during the Holocene (<11,500 B.P.), and the accelerated expansion of the woodlands since settlement of the West by Anglo-Americans around 200 years ago. We follow the fates of seeds and seedlings of the different piUnon and juniper species within the woodlands from seed development to seedling establishment, and discuss the implications of this information for the past and present expansion of the woodlands. While seed development requires about two and one-half years in piUnons, it is species-dependent in junipers and can take one, two, or even three years. Substantial seed losses can occur during seed development due to developmental constraints, and before or after seed maturation as a result of insects, pathogens, or predatory animals. In piUnon pines, the primary seed dispersers are scatterhoarding birds (corvids) and rodents that harvest seeds from the trees or after seed fall and cache them in the soil. In contrast, most junipers appear to be dispersed primarily by frugivorous birds and mammals that ingest the seeds and defecate them onto the soil surface. We have recently documented that scatter-hoarding rodents also disperse juniper seeds. Disperser effectiveness, or the contribution a disperser makes to the future reproduction of a plant population, may vary among species of piUnons and especially junipers. PiUnon seeds are short-lived and exhibit little dormancy, and they probably only **germinate** the spring following dispersal. Juniper seeds are long-lived and seed dispersal can occur over one or more years. Seed **germination** can be delayed for several years due to impermeable **seed coats** , embryo dormancy, or the presence of inhibitors. Seedling establishment of piUnon pines is facilitated by nurse plants but, while junipers often establish beneath nurse plants, they are capable of establishing in open environments. In the southwestern United States, higher establishment of juniper occurs in open environments due to more favorable precipitation, and competition may be more important than facilitation in determining establishment. When considering the mechanisms involved in the past and present expansion of the woodlands, short-distance dispersal, local population growth, and long-distance dispersal are all important. Different classes of dispersers, some of which appear to have coevolved with the tree species, appear to be responsible for local (short-distance) vs. long-distance dispersal in piUnons and junipers. Because ecotones form the interface between the woodlands and adjacent communities, they can provide valuable information on both the seed dispersal and seedling establishment processes responsible for tree

expansion. Disturbance regimes and, recently, the effects of humans on those regimes have major effects on the expansion and contraction of the woodlands. Before Anglo-American settlement, fires occurred as frequently as every 50-100 years throughout much of the woodlands. During this century, fire frequencies have been reduced due to the indirect effects of livestock grazing and the direct effects of removing Native Americans from the ecosystem and implementing active fire-prevention programs. The result has been an increase in tree-dominated successional stages at the expense of grass-dominated stages. Various management techniques, including controlled burning and chaining, have been implemented to reduce tree dominance, but their effects depend largely on the life histories of the tree species and the disturbance characteristics. Several areas relating to the seed and seedling ecology of the piUnon and juniper require additional research if we are to truly understand the dynamics of the woodlands. Reprinted by permission of the publisher.

15/3,AB/8 (Item 1 from file: 434)

05509443 Genuine Article#: RV785 Number of References: 17

Title: EFFECT OF WATER-STRESS, SEED COAT **RESTRAINT, AND ABSCISIC-ACID UPON DIFFERENT** GERMINATION **CAPABILITIES OF 2 TOMATO LINES AT** LOW - TEMPERATURE

Author(s): LIPTAY A; SCHOPFER P
Corporate Source: AGR CANADA,RES STN/HARROW N0R 1G0/ONTARIO/CANADA/; UNIV FREIBURG,INST BIOL 2/D-7800 FREIBURG//FED REP GER/

Journal: PLANT PHYSIOLOGY, 1983, V73, N4, P935-938
Language: ENGLISH Document Type: ARTICLE

25/3,AB/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13197093 BIOSIS NO.: 200100404242
Effect of thermal storage on seed coat dormancy and germination **of Ipomoea purpurea (L.) Roth (Convolvulaceae) seeds.**
AUTHOR: Brechu-Franco A E(a); Ponce-Salazar R M; Laguna-Hernandez G; Marquez-Guzman J
AUTHOR ADDRESS: (a)Universidad Nacional Autonoma de Mexico, Ciudad Universitaria, C.P. 04510, Mexico, D.F.**Mexico
JOURNAL: Phyton (Buenos Aires) 67p187-194 2000
MEDIUM: print
ISSN: 0031-9457
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English

ABSTRACT: The impermeability of the Ipomoea purpurea (L.) Roth (Convolvulaceae) seed coat may change if the seeds are exposed to different temperatures during the six months of the dry season, i.e. from dispersal to the beginning of the rainy season. The effects on seed coat dormancy of three constant storage temperatures (15 degreeC, 25 degreeC and 35 degreeC), over a six month period were evaluated. 96% of the impermeable newly collected seeds were not affected by storage at 15 degreeC: 97% of these remained hard and only 3% **germinated** ; while seeds stored at 25 degreeC and 35 degreeC had broken seed **coat** dormancy in nonscarified **seeds** , increasing **germination** up to 80% and 95%, respectively. Results show that: a) under the three thermal conditions, seeds maintained their viability during six months, b) **seed coat** impermeability was preserved at **low** storage **temperature** with the potential formation of a seed bank, and c) seed coat dormancy was broken by the high storage temperatures of 25 degreeC and 35 degreeC, and the resulting permeable seeds could **germinate** in the favorable conditions of the rainy season.

2000

25/3,AB/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

08163528 BIOSIS NO.: 000093138976
SEEDS OF KOSTELETZKYA-VIRGINICA MALVACEAE THEIR STRUCTURE GERMINATION **AND SALT TOLERANCE I. SEED STRUCTURE AND** GERMINATION
AUTHOR: POLJAKOFF-MAYBER A; SOMERS G F; WERKER E; GALLAGHER J L
AUTHOR ADDRESS: UNIV. DELAWARE, COLL. MARINE STUDIES, LEWES, DEL. 19958.
JOURNAL: AM J BOT 79 (3). 1992. 249-256. 1992
FULL JOURNAL NAME: American Journal of Botany
CODEN: AJBOA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Dormancy of Kosteletzkya virginica (L.) Presl. seeds is primarily due to the impermeability of the seed coat to water. The impermeable structure is assumed to be, in other Malvaceae, the palisade layer of the seed **coat** . The percentage of **seeds** capable of imbibition and **germination** increased with increasing time of storage at low temperatures, but the release from dormancy was not accompanied by decreased seed coat resistance to pressure. Under natural conditions, mechanical damage to the seed coat due to changes in temperature and/or

abrasion may render the seeds water permeable. It is not clear what causes water permeability during storage under laboratory conditions. During seed maturation and drying, the inner epidermis of the tegmen partly separates from the rest of the seed coat and an air space, which makes the seed buoyant, is formed around the region of the chalazal cleft. The optimal temperature for **germination** of K. virginica seeds is between 28 and 30 C in light or darkness.

1992

25/3,AB/3 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

04317011 BIOSIS NO.: 000078046554
BIOLOGICAL CONTROL EFFECTS OF A NEW ISOLATE OF TRICHODERMA-HARZIANUM ON PYTHIUM-APHANIDERMATUM
AUTHOR: SIVAN A; ELAD Y; CHET I
AUTHOR ADDRESS: DEP. PLANT PATHOL. MICROBIOL., FAC. AGRIC., HEBR. UNIV. JERUSALEM, REHOVOT 76100, ISRAEL.
JOURNAL: PHYTOPATHOLOGY 74 (4). 1984. 498-501. 1984
FULL JOURNAL NAME: Phytopathology
CODEN: PHYTA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: A wheat-bran plus peat mixture (1:1 vol/vol) was the most efficient of the raw plant material substrates (which included several agricultural plant wastes) found suitable for growing a new isolate of T. harzianum (T-315). The bran/peat preparation of T. harzianum, applied to either soil or rooting mixture, efficiently controlled damping-off induced by P. aphanidermatum in peas [Pisum sativum cv. Perfection], cucumbers [Cucumis sativus cv. Alma], tomatoes [Lycopersicon esculentum cv. Rehovot 13], peppers [Capsicum annuum cv. Maor] and gypsophila [Gypsophila paniculata cv. Bristol Fairy]. Disease reduction of up to 85% was obtained in tomatoes. T. harzianum applied in a seed coating mixture containing 5 .times. 109 conidia/ml was as effective in sandy soil as the broadcast application of wheat bran/peat preparation. However, the broadcast application was superior to seed coating for protecting tomato seedlings in an infested peat/vermiculite rooting mixture. When **germinated** at **low temperature** (22.degree. C) pea **seeds coated** with conidia of T. hamatum were better protected from P. aphanidermatum than seeds with T. harzianum, but this was not the case at 30.degree. C. Extracellular filtrate from cultures of T. harzianum, added to a synthetic medium, inhibited linear growth of P. aphanidermatum by 83% compared with 8% inhibition by a culture filtrate of T. hamatum. Substances excreted by P. aphanidermatum into the growth medium enhanced the linear growth of T. harzianum by 34%, but not that of T. hamatum.

1984

25/3,AB/4 (Item 4 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

03542446 BIOSIS NO.: 000073045527
VARIATION IN SEED GERMINATION **INHIBITION OF CHENOPODIUM-BONUS-HENRICUS IN RELATION TO ALTITUDE OF** PLANT GROWTH
AUTHOR: DORNE A-J
AUTHOR ADDRESS: LABORATOIRE DE PHYSIOLOGIE CELLULAIRE VEGETALE, UNIV. SCIENTIFIQUE ET MED. DE GRENOBLE, B.P. 53X, F-38041 GRENOBLE, FR.

JOURNAL: CAN J BOT 59 (10). 1981. 1893-1901. 1981
FULL JOURNAL NAME: Canadian Journal of Botany
CODEN: CJBOA
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: C. bonus-henicus achenes have poor **germination** whatever the temperature; this phenomenon is reinforced with increasing elevation of seed harvest. Since the excised embryo is never dormant, **germination** of intact seeds is prevented by the seed coat. The seed coat thickens and contains more polyphenols with increasing elevation. This process apparently is responsible for the reduced permeability of the **seed coat** . High **germination temperatures reduce** the gas solubility in water and, at the same time, increase polyphenol oxidation in the seed **coat** . The embryos of **seeds** collected at low elevation thus receive a reduced O2 flux. When high temperature is applied to seeds from high elevation, the O2 flux is drastically reduced because of the thicker seed coat and increased levels of oxidizable polyphenols. There is a high correlation between **germination** and the mean of the average daily temperature for the 30 days preceding harvest, high temperature prior to harvest being correlated with high **germination** . Progenies of plants transferred from high to low elevation (and the inverse) show the direct influence of the new environment on the seed coat inhibition of **germination** .

1981

25/3,AB/5 (Item 5 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

03279107 BIOSIS NO.: 000072007210
SEED GERMINATION **IN TRIANTHEMA-PORTULACASTRUM EFFECT OF PRE TREATMENTS ON** GERMINATION
AUTHOR: KUMAR S
AUTHOR ADDRESS: DEP. BOT., MAHARAJ SINGH COLL., SAHARANPUR-247001, INDIA.
JOURNAL: INDIAN J ECOL 7 (2). 1980 (RECD. 1981). 229-236. 1980
FULL JOURNAL NAME: Indian Journal of Ecology
CODEN: IJECD
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: The effect of various scarification pretreatments of the seeds of T. portalacastrum var. rubra and T. portalacastrum var. flava rainy season annual weeds was studied. Mechanical scarification by partial and complete removal of the seed coat of the fresh and old seeds enhanced seed **germination** . The chemical scarification by H2SO4 also increased **germination** showing that the **seeds** had seed **coat** dormancy. A brief pre-sowing high temperature treatment also enhanced **germination** . Pre-**germination** low temperature treatment usually had an inhibitory effect on both varieties. Maximum **germination** in both varieties was observed in 9 mo. old seeds. When fresh seeds of both varieties were washed, **germination** increased considerably, indicating the presence of water soluble growth inhibitors in fresh seeds. No such pronounced effect was observed when the old seeds were washed, indicating that the inhibitors were lost during storage.

1980

25/3,AB/6 (Item 6 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

02447166 BIOSIS NO.: 000066029710
DETERMINATION OF CHILLING SENSITIVE PERIODS DURING THE GERMINATION **OF COTTONSEED**
AUTHOR: WILES E L; DOWNS R J
AUTHOR ADDRESS: N.C. STATE UNIV., RALEIGH, N.C. 27607, USA.
JOURNAL: SEED SCI TECHNOL 5 (4). 1977 (RECD 1978) 649-657. 1977
FULL JOURNAL NAME: Seed Science and Technology
CODEN: SSTCB
RECORD TYPE: Abstract
LANGUAGE: ENGLISH

ABSTRACT: Cotton **seeds** , with or without **seed coats** , were given brief exposures to **chilling** temperatures of 5.degree. C immediately after the initiation of water imbibition (initial chilling) or after a short interval of **germination** at 27.degree. C (interrupted chilling). After the chilling treatments all seeds were **germinated** at 27.degree. C and samples were periodically withdrawn for measurement of fresh and dry weight, and morphological examination. The seeds were sensitive to chilling at 2 different periods, 1-2 h after water imbibition depending upon whether the seed coats were intact or absent. With interrupted chilling regimes, the greatest degree of **chilling** sensitivity was observed in **seeds** with **seed coats** . Hydration curves revealed that the **coated seeds** had a 2-phase pattern of water uptake as contrasted to the constant linear rate of water uptake in **coatless seeds** . The factors that reduced water absorption rates, in order of importance, were **low temperature** , limited available moisture and **seed coats** .

1977

25/3,AB/7 (Item 1 from file: 10)
DIALOG(R)File 10:AGRICOLA

2863635 89002271 Holding Library: AGL
The importance of seed coat integrity on seedling establishment
Taylor, A.G. Dickson, M.H.
Wageningen : International Society for Horticultural Science.
Acta horticulturae. June 1987. (198) p. 181-185.
ISSN: 0567-7572 CODEN: AHORA
DNAL CALL NO: 80 AC82
Language: English

25/3,AB/8 (Item 1 from file: 50)
DIALOG(R)File 50:CAB Abstracts

01995337 CAB Accession Number: 881600084
Inhibition of seed germination **in lettuce at high temperature.**
Damania, A. B.
Dep. Pl. Biol., Univ. Birmingham, B15 2TT, UK.
Seed Research vol. 14 (2): p.177-184
Publication Year: 1986
ISSN: 0379-5594 --
Language: English
Document Type: Journal article
Seeds of 62 accessions were **germinated** in controlled climate cabinets at temperatures from 22 deg C to 33 deg C. The upper temperature limits for a 50% reduction in **germination** percentage ranged from 26.3 deg C for Imperial Summer 847 from New Zealand to 31.5 deg C for USDA268405, a

landrace from Afghanistan. The upper temperature limit for most accessions was 29-30 deg C. Within accessions where both black and white **coated seeds** were present in a mixture, the black **coated seeds** tended to have **lower** upper **temperature** limits than their white counterparts. 10 ref.

25/3,AB/9 (Item 2 from file: 50)
DIALOG(R)File 50:CAB Abstracts

01251309 CAB Accession Number: 822338222
Effects of pre- chilling **on Convolvulus arvensis L.** seed coat **and** germination .
Jordan, L. S.; Jordan, J. L.
Dep. Bot. and Plant Sci., Univ. California, Riverside, CA 92521, USA.
Annals of Botany vol. 49 (3): p.421-423
Publication Year: 1982
ISSN: 0305-7364 --
Language: English
Document Type: Journal article
Seeds of Convolvulus arvensis pre-chilled at 5 deg C in the dark for 21 and 42 days **germinated** 55% and 85%, respectively, while unchilled seeds **germinated** 10%. Scanning electron micrographs showed that the seed **coats** of unchilled **seeds** were compact and non-porous while those of seeds chilled for 21 and 42 days were increasingly porous. Seed coat porosity was the result of cell digestion in the palisade sclerenchyma and underlying parenchyma. Water and gas exchange through the seed coat increased with increasing porosity, thereby facilitating **germination** . 5 ref.

25/3,AB/10 (Item 3 from file: 50)
DIALOG(R)File 50:CAB Abstracts

00625901 CAB Accession Number: 780768976
Determination of chilling sensitive periods during the germination **of cotton seed.**
Wiles, E. L.; Downs, R. J.
North Carolina State Univ., Raleigh, NC 27607, USA.
Seed Science and Technology vol. 5 (4): p.649-657
Publication Year: 1977
ISSN: 0251-0952 --
Language: English Summary Language: french; german
Document Type: Journal article
Cotton **seeds** , with or without **seed coats** , were given brief exposure to **chilling** temperatures of 5 deg C immediately after the initiation of water imbibition (initial chilling) or after a short interval of **germination** at 27 deg (interrupted chilling). After the chilling treatments, all seeds were **germinated** at 27 deg and samples were periodically withdrawn for measurement of fresh and dry wt. and morphological examination. The initial chilling treatments indicated that the seeds were sensitive to chilling at 2 different periods, 1-2 h after water imbibition depending upon whether the seed coats were intact or absent. With interrupted chilling regimes, the greatest degree of **chilling** sensitivity was observed in **seeds** with **seed coats** . Hydration curves revealed that the **coated seeds** had a 2-phase pattern of water uptake as contrasted to the constant linear rate of water uptake in **coatless seeds** . The factors that reduced water absorption rates, in order of importance, were low temp., limited available moisture and seed coats. 19 ref.

25/3,AB/11 (Item 4 from file: 50)
DIALOG(R)File 50:CAB Abstracts

00026529 CAB Accession Number: 720303728
Peach seed dormancy in relation to endogenous inhibitors and applied growth substances.
Diaz, D. H.; Martin, G. C.
California University, Davis.
Journal of the American Society for Horticultural Science vol. 97 (5): p.651 - 654
Publication Year: 1972
ISSN: 0003-1062 --
Language: English
Document Type: Journal article
An inhibitor was present in both the **seed coats** and embryos of unstratified **seeds** of a high and low **chilling** peach cv. and its concentration decreased as stratification proceeded. Embryonic tissue retained more of the inhibitor than the seed coat. As the concentration of inhibitor decreased, seed **germination** increased. The inhibitor was tentatively identified as ABA. A bound inhibitor was also present in the seed parts of both cvs, and its concentration rose in the embryo as stratification proceeded. More ABA and bound inhibitor were present in the high-chilling than in the low-chilling cv., indicating that they may be related as factors which cause a cv. to require long periods of chilling. An application of ABA reduced the **germination** percentage of stratified **seeds** without seed **coats** . An application of GA + BA had a synergistic effect in promoting **germination** of dormant seeds. 14 ref.

25/3,AB/12 (Item 1 from file: 98)
DIALOG(R)File 98:General Sci Abs/Full-Text

04020054 H.W. WILSON RECORD NUMBER: BGSI99020054
How to get your garden growing in the middle of winter.
Hartley, Kelly
National Wildlife (Natl Wildl) v. 37 no2 (Feb./Mar. 1999) p. 14-15
SPECIAL FEATURES: il ISSN: 0028-0402
LANGUAGE: English
COUNTRY OF PUBLICATION: United States
WORD COUNT: 1154

ABSTRACT: Advice is provided on planting seeds indoors during the winter months

25/3,AB/13 (Item 1 from file: 203)
DIALOG(R)File 203:AGRIS

01210821 AGRIS No: 87-061196
Direct seeding cultivation on submerged paddy in rice, 1; seedling emergence and early growth under different temperature and seeding depth
Park, S.H.; Lee, C.W.; Yang, W.H.; Park, R.K. (Rural Development Administration, Suwon (Korea R.). Crop Experiment Station)
Journal: Korean Journal of Crop Science, Jul 1986, v. 31(2) p. 204-213
Language: Korean Summary Language: English, Korean
The objective of this paper was to examine the response of rice seedling emergence and early growth under the different temperature (day/night, 29/21 deg C, 17/17 deg C, 12/12 deg C) and the different seeding depth (1 cm, 2 cm, 3 cm). The trial was carried out in the phytotron and field in

the Crop Experiment Station, Suwon, Korea in 1985. Calcium peroxide-**coated seeds** were very effective in promoting seedling emergence, seedling establishment and early growth of rice. **Coated seeds** were more effective in **low temperature** condition (17/17 deg C, 12/12 deg C) than in high temperature (29/21 deg C) at the phytotron trial. The deeper the seeding depth, the less the emergence and seedling establishment, and the available seeding depth was 1 cm in the direct seeding under the flooded soil.

32/3,AB/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

12989608 BIOSIS NO.: 200100196757
Process for preservation of germinated **seeds.**
AUTHOR: **Kohno Yasushi** (a); Maejima Takamichi; Inose Kazuhiro; Nishiyama Yugo
AUTHOR ADDRESS: (a)Himeji**Japan
JOURNAL: Official Gazette of the United States Patent and Trademark Office Patents 1238 (1):pNo Pagination Sep. 5, 2000
MEDIUM: e-file
ISSN: 0098-1133
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: A seed 9 is held in an **aqueous gel** 7 so as to constitute a **seed covered** with gel S. **Seed covered** with gel S is dried after seed 9 **germinates** . Otherwise, a through hole 12a is pierced vertically within a gel culture medium 12, a seed 13 is inserted into trough hole 12a, and gel culture medium 12 including seed 13 is dried after seed 13 **germinates** .

2000

37/3,AB/1 (Item 1 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

13619832 BIOSIS NO.: 200200248653
Environmental factors affecting rosette formation of Elatum hybrids of Delphinium.
AUTHOR: **Katsutani Noritoshi** (a); Kajihara Shinji; Hara Hirokazu
AUTHOR ADDRESS: (a)Hiroshima Prefectural Agriculture Research Center, Hachihonmatsu, Higashihiroshima, Hiroshima, 739-0151**Japan
JOURNAL: Journal of the Japanese Society for Horticultural Science 71 (2): p272-276 March, 2002
MEDIUM: print
ISSN: 0013-7626
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: Japanese; Non-English

ABSTRACT: To determine environmental factors involved in rosette formation of Elatum hybrids of Delphinium, bolting behavior in response to temperatures, photoperiods, and light intensities was investigated. Seedlings rosetted under a natural 10-12 hr photoperiod during winter at 22 degreeC. Seedlings subjected to 25/20 degreeC (day/night) for 40 days just after **germination** formed rosettes after they were transferred to below 20/15 degreeC, whereas they bolted quickly when they were kept at the continuously high temperature. A high percentage of seedlings bolted when they were transferred to a greenhouse kept above 18 degreeC in early October, but those kept at a minimum temperature of 10 degreeC formed rosettes. This rosette formation was also accelerated by exposing seedlings to 50% shading. We conclude that short days induce rosette formation in Elatum hybrids of Delphinium and that **cool** temperature accelerated it. Exposure of seedlings to high temperatures during the early seedling stage and/or low light intensity after planting also enhanced rosette formation.

2002

37/3,AB/2 (Item 2 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)

11023453 BIOSIS NO.: 199799644598
Studies on the flowering behaviour of perennial Delphinium.
AUTHOR: **Katsutani Noritoshi** ; Ikeda Yoshinobu
AUTHOR ADDRESS: Hiroshima Prefectural Agric. Res. Cent., Hachihonmatsu-cho, Higashihiroshima-shi, Hiroshima 739-01**Japan
JOURNAL: Journal of the Japanese Society for Horticultural Science 66 (1): p121-131 1997
ISSN: 0013-7626
RECORD TYPE: Abstract
LANGUAGE: Japanese; Non-English
SUMMARY LANGUAGE: Japanese; English

ABSTRACT: Delphinium seeds were sown early each month throughout the year and the seedlings were transplanted to an unheated greenhouse to study the seasonal change on the flowering behaviour of delphinium. The formation of flower buds was observed microscopically, whereas the effect of temperature on bolting and flowering was macroscopically studied in a phytotron. Furthermore, the bolting characteristics of several cultivars in a heated house under natural day-length were also studied. 1. Flower bud differentiation occurred under a wide range of temperatures almost year-round. When seedlings were planted in warm and hot seasons, the

period from **sowing** to flower bud differentiation was shortened, whereas, when they were planted during the **cool** or cold seasons, the period was prolonged. Therefore, the flower bud differentiation process is hastened by high temperatures. 2. Delphinium seedlings react sensitively to the higher temperature; when the temperatures were kept constant at or higher than 20 degree C, seedlings bolted after the plants developed 5 or more leaves. However, plants kept at 15 degree C remained in the juvenile phase for an extremely prolonged period and about half assumed the rosette form. 3. When the seeds were sown in March-July and the seedlings were transplanted in summer, the plants differentiated flower buds at a lower node and produced poor spikes with few florets. **Plants** derived from **seeds** sown in August-February developed many leaves below the first floret, produced spikes of higher quality with more florets. Thus, the greater the ratio of leaves to floret, the more florets per spike were formed. 4. **Low temperature** did not act as vernalization inducing in the flower bud initiation, but caused the rosette to break or expanded the temperature range the **plant** could **grow** to **lower** side. Thus, **low temperature** acted to make growth activity higher. 5. Flower bud differentiation was always accompanied with bolting even under unheated conditions, so that the time of flower bud differentiation could be estimated easily. Therefore, early bolting plants resulting in a low cut flower quality can be eliminated at an earlier stage before transplanting. 6. When delphinium were grown in a heated house under natural day-length, many cultivars formed rosettes. Plants, which formed rosettes, were slow to bolt and produced malformed spikes.

1997

37/3,AB/3 (Item 1 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

10498057 Genuine Article#: 533EZ Number of References: 4
Title: Environmental factors affecting rosette formation of Elatum hybrids of Delphinium (ABSTRACT AVAILABLE)
Author(s): **Katsutani N (REPRINT)** ; Kajihara S; Hara H
Corporate Source: Hiroshima Prefectural Agr Res Ctr,Higashihiroshima/Hiroshima 7390151/Japan/ (REPRINT); Hiroshima Prefectural Agr Res Ctr,Higashihiroshima/Hiroshima 7390151/Japan/
Journal: JOURNAL OF THE JAPANESE SOCIETY FOR HORTICULTURAL SCIENCE, 2002, V 71, N2 (MAR), P272-276
ISSN: 0013-7626 Publication date: 20020300
Publisher: JAPAN SOC HORTICULTURAL SCI, KYOTO UNIV, FACULTY AGRICULTURE, SAKYOKU, KYOTO, JAPAN
Language: English Document Type: ARTICLE
Abstract: To determine environmental factors involved in rosette formation of Elatum hybrids of Delphinium, bolting behavior in response to temperatures, photoperiods, and light intensities was investigated.

Seedlings rosetted under a natural 10-12 hr photoperiod during winter at 22 degreesC. Seedlings subjected to 25/20 degreesC (day/night) for 40 days just after **germination** formed rosettes after they were transferred to below 20/15 degreesC, whereas they bolted quickly when they were kept at the continuously high temperature. A high percentage of seedlings bolted when they were transferred to a greenhouse kept above 18 degreesC in early October, but those kept at a minimum temperature of 10 degreesC formed rosettes. This rosette formation was also accelerated by exposing seedlings to 50% shading.

We conclude that short days induce rosette formation in Elatum hybrids of Delphinium and that **cool** temperature accelerated it.

Exposure of seedlings to high temperatures during the early seedling stage and/or low light intensity after planting also enhanced rosette formation.

37/3,AB/4 (Item 2 from file: 34)
DIALOG(R)File 34:SciSearch(R) Cited Ref Sci

05880311 Genuine Article#: XD998 Number of References: 7
Title: Studies on the flowering behaviour of perennial Delphinium (ABSTRACT AVAILABLE)
Author(s): **Katsutani N (REPRINT)** ; Ikeda Y
Corporate Source: HIROSHIMA PREFECTURAL AGR RES CTR,HACHIHOMMATSU CHO/HIGASHIHIROSHIMA 73901//JAPAN/ (REPRINT)
Journal: JOURNAL OF THE JAPANESE SOCIETY FOR HORTICULTURAL SCIENCE, 1997, V 66, N1 (JUN), P121-131
ISSN: 0013-7626 Publication date: 19970600
Publisher: JAPAN SOC HORTICULTURAL SCI, KYOTO UNIV, FACULTY AGRICULTURE, SAKYOKU, KYOTO JAPAN
Language: Japanese Document Type: ARTICLE
Abstract: Delphinium seeds were sown early each month throughout the year and the seedlings were transplanted to an unheated greenhouse to study the seasonal change on the flowering behaviour of delphinium. The formation of flower buds was observed microscopically, whereas the effect of temperature on bolting and flowering was macroscopically studied in a phytotron. Furthermore, the bolting characteristics of several cultivars in a heated house under natural day-length were also studied.

1. Flower bud differentiation occurred under a wide range of temperatures almost year-round. When seedlings were planted in warm and hot seasons, the period from **sowing** to flower bud differentiation was shortened, whereas, when they were planted during the **cool** or cold seasons, the period was prolonged, Therefore, the flower bud differentiation process is hastened by high temperatures.

2. Delphinium seedlings react sensitively to the higher temperature; when the temperatures were kept constant at or higher than 20 degrees C, seedlings bolted after the plants developed 5 or more leaves. However, plants kept at 15 degrees C remained in the juvenile phase for an extremely prolonged period and about half assumed the rosette form.

3. When the seeds were sown in March-July and the seedlings were transplanted in summer, the plants differentiated flower buds at a lower node and produced poor spikes with few florets. **Plants** derived from **seeds** sown in August-February developed many leaves below the first floret, produced spikes of higher quality with more florets, Thus, the greater the ratio of leaves to floret, the more florets per spike were formed.

4. **Low temperature** did not act as vernalization inducing in the flower bud initiation, but caused the rosette to break or expanded the temperature range the **plant** could **grow** to **lower** side. Thus, **low temperature** acted to make growth activity higher.

5. Flower bud differentiation was always accompanied with bolting even under unheated conditions, so that the time of flower bud differentiation could be estimated easily. Therefore, early bolting plants resulting in a low cut flower quality can be eliminated at an earlier stage before transplanting.

6. When delphinium were grown in a heated house under natural day-length, many cultivars formed rosettes. Plants, which formed

rosettes, were slow to bolt and produced malformed spikes.

37/3,AB/5 (Item 1 from file: 50)
DIALOG(R)File 50:CAB Abstracts

03399228 CAB Accession Number: 970307400
Studies on the flowering behaviour of perennial Delphinium.
Katsutani, N.; Ikeda, Y.
Hiroshima Prefectural Agriculture Research Center, Hachihonmatsu-cho, Higashihiroshima-shi, Hiroshima 739-01, Japan.
Journal of the Japanese Society for Horticultural Science vol. 66 (1): p.121-131
Publication Year: 1997
ISSN: 0013-7626 --
Language: Japanese Summary Language: english
Document Type: Journal article
Delphinium cv. Blue Springs seeds were sown early each month throughout the year and the seedlings were transplanted to an unheated greenhouse to study the seasonal changes in flowering behaviour of delphinium. The formation of flower buds was observed microscopically, whereas the effect of temperature on bolting and flowering was studied in a phytotron. The bolting characteristics of several cultivars (Belladona Imp, M.F. Sky Blue, P.G. Blue Bird and Blue Springs) in a heated house under natural day-length were also studied. Flower bud differentiation occurred under a wide range of temperatures almost all year round. When seedlings were planted in warm and hot seasons, the period from **sowing** to flower bud differentiation was shortened, whereas, when they were planted during the **cool** or cold seasons, the period was prolonged, indicating that the flower bud differentiation process is hastened by high temperatures. In the phytotron study, when the temperatures were kept constant at or higher than 20 deg C, seedlings bolted after the plants had developed 5 or more leaves. However, plants kept at 15 deg remained in the juvenile phase for an extremely prolonged period and about half assumed a rosette form. When the seeds were sown during March-July and the seedlings were transplanted in summer, the plants differentiated flower buds at a lower node and produced poor spikes with few florets. **Plants** derived from **seeds** sown in August-February developed many leaves below the first floret, and produced spikes of higher quality with more florets. Thus, the greater the ratio of leaves to floret, the more florets per spike were formed. **Low temperature** did not act as a vernalization treatment by inducing flower initiation, but caused the rosette to break or expanded the temperature range in which the **plant** could **grow** at the **lower** end. Thus, **low temperatures** increased growth activity. Flower bud differentiation was always associated with bolting even under unheated conditions, so that the time of flower bud differentiation could be estimated easily. Early-bolting plants resulting in a low cut flower quality could therefore be eliminated at an earlier stage before transplanting. When delphiniums were grown in a heated house under natural day-length, many cultivars formed rosettes. Plants which formed rosettes were slow to bolt and produced malformed spikes. 17 ref.

37/3,AB/6 (Item 1 from file: 94)
DIALOG(R)File 94:JICST-EPlus

04383046 JICST ACCESSION NUMBER: 99A0922069 FILE SEGMENT: JICST-E
Studies on the Flowering Behaviour of Perennial Delphinium.
KATSUTANI NORITOSHI (1); IKEDA YOSHINOBU (1)
(1) Hiroshima Prefectural Agricultural Res. Center
Engei Gakkai Zasshi(Journal of the Japanese Society for Horticaltural

Science), 1997, VOL.66,NO.1, PAGE.121-131, FIG.5, TBL.4, REF.17
JOURNAL NUMBER: F0626AAZ ISSN NO: 0013-7626 CODEN: EGKZA
UNIVERSAL DECIMAL CLASSIFICATION: 635.9 581.14
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Original paper
MEDIA TYPE: Printed Publication
ABSTRACT: Delphinium seeds were sown early each month throughout the year and the seedlings were transplanted to an unheated greenhouse to study the seasonal change on the flowering behaviour of delphinium. The formation of flower buds was observed microscopically, whereas the effect of temperature on bolting and flowering was macroscopically studied in a phytotron. Furthermore, the bolting characteristics of several cultivars in a heated house under natural day-length were also studied. 1. Flower bud differentiation occurred under a wide range of temperatures almost year-round. When seedlings were planted in warm and hot seasons, the period from **sowing** to flower bud differentiation was shortened, whereas, when they were planted during the **cool** or cold seasons, the period was prolonged. Therefore, the flower bud differentiation process is hastened by high temperatures. 2. Delphinium seedlings react sensitively to the higher temperature; when the temperatures were kept constant at or higher than 20.DEG.C., seedlings bolted after the plants developed 5 or more leaves. However, plants kept at 15.DEG.C. remained in the juvenile phase for an extremely prolonged period and about half assumed the rosette form. 3. When the seeds were sown in March-July and the seedlings were transplanted in summer, the plants differentiated flower buds at a lower node and produced poor spikes with few florets. **Plants** derived from **seeds** sown in August-February developed many leaves below the first floret, produced spikes of higher quality with more florets. Thus, the greater the ratio of leaves to floret, the more florets per spike were formed. 4. **Low temperature** did not act as vernalization inducing in the flower bud initiation, but caused the rosette to break or expanded the temperature range the **plant** could **grow** to lower side. (author abst.)

37/3,AB/7 (Item 2 from file: 94)
DIALOG(R)File 94:JICST-EPlus

03783802 JICST ACCESSION NUMBER: 98A0909310 FILE SEGMENT: JICST-E
Early forcing culture of delphinium by cooling **nursing seedling.**
KATSUTANI NORITOSHI (1); KAJIWARA SHINJI (1); YOKOMICHI YUTAKA (2)
(1) Hiroshima Prefectural Agricultural Res. Center; (2) Chugoku Electr. Power Co., Inc.
Nogyo Denka, 1998, VOL.51,NO.10, PAGE.31-35, FIG.10, TBL.2
JOURNAL NUMBER: L2204AAL ISSN NO: 0286-8725
UNIVERSAL DECIMAL CLASSIFICATION: 635.9
LANGUAGE: Japanese COUNTRY OF PUBLICATION: Japan
DOCUMENT TYPE: Journal
ARTICLE TYPE: Commentary
MEDIA TYPE: Printed Publication

37/3,AB/8 (Item 1 from file: 203)
DIALOG(R)File 203:AGRIS

02225547 AGRIS No: 1998-036192
Studies on the flowering behaviour of perennial Delphinium
Katsutani, N. (Hiroshima-ken. Agricultural Experiment Station, Higashihiroshima (Japan)); Ikeda, Y.

Journal: Journal of the Japanese Society for Horticultural Science, Jun 1997, v. 66(1) p. 121-131
Language: Japanese Summary Language: English, Japanese
Delphinium seeds were sown early each month throughout the year and the seedlings were transplanted to an unheated greenhouse to study the seasonal change on the flowering behaviour of delphinium. The formation of flower buds was observed microscopically, whereas the effect of temperature on bolting and flowering was macroscopically studied in a phytotron. Furthermore, the bolting characteristics of several cultivars in a heated house under natural day-length were also studied. (1) Flower bud differentiation occurred under a wide range of temperatures almost year-round. When seedlings were planted in warm and hot seasons, the period from **sowing** to flower bud differentiation was shortened, whereas, when they were planted during the **cool** or cold seasons, the period was prolonged. Therefore, the flower bud differentiation process is hastened by high temperatures. (2) Delphinium seedlings react sensitively to the higher temperature; when the temperatures were kept constant at or higher than 20 degrees C, seedlings bolted after the plants developed 5 or more leaves. However, plants kept at 15 degrees C remained in the juvenile phase for an extremely prolonged period and about half assumed the rosette form. (3) When the seeds were sown in March-July and the seedlings were transplanted in summer, the plants differentiated flower buds at a lower node and produced poor spikes with few florets. **Plants** derived from **seeds** sown in August-February developed many leaves below the first floret, produced spikes of higher quality with more florets. Thus, the greater the ratio of leaves to floret, the more florets per spike wee formed. (4) **Low temperature** did not act as vernalization inducing in the flower bud initiation, but caused the rosette to break or expanded the temperature range the **plant** could **grow** to **lower** side. Thus, **low temperature** acted to make growth activity higher.